Florida HEALTH NOTES

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MURINE TYPHUS FEVER

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Florida HEALTH NOTES

ESTABLISHED 1890

TYPHUS FEVER, A PROBLEM MERITING CONCERTED ACTION IN FLORIDA

One of the most pressing problems in the public health engineering and sanitation field in Florida is the situation confronting us regarding Murine, (a disease spread from rat to man by the rat flea) or endemic typhus fever. As pointed out in the following pages this disease has assumed, at an almost alarming rate, a proportion which easily has placed it among the "must" items for public health workers. The magnitude of the problem, and its rapid increase in size, cause it to be of much concern to thinking citizens.

In developing plans for a long-range project for effective and lasting control of endemic typhus in Florida and, incidentally, for the suppression of costly and absolutely worthless rat life, about the best we feel in position to state at this time is that a good substantial start has been made. This beginning is reflected in the amounts of work accomplished in several localities within the State, some of which are mentioned in this issue.

It should be stated that much credit is due the public health workers, the other local officials and interested citizens who are actively participating in the solution of this State-wide problem in their respective communities. Their efforts will doubtless pay handsome dividends. And in emphasizing again the feeling that only a good start has been made, we can only state that the need is indeed urgent for a complete and concerted effort in actively supporting the dvelopment of this program for destruction of the rat and control of endemic typhus fever throughout our State.

DAVID B. LEE,
Chief Sanitary Engineer,
Florida State Board of Health.

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THE PREVALENCE OF ENDEMIC TYPHUS FEVER IN FLORIDA

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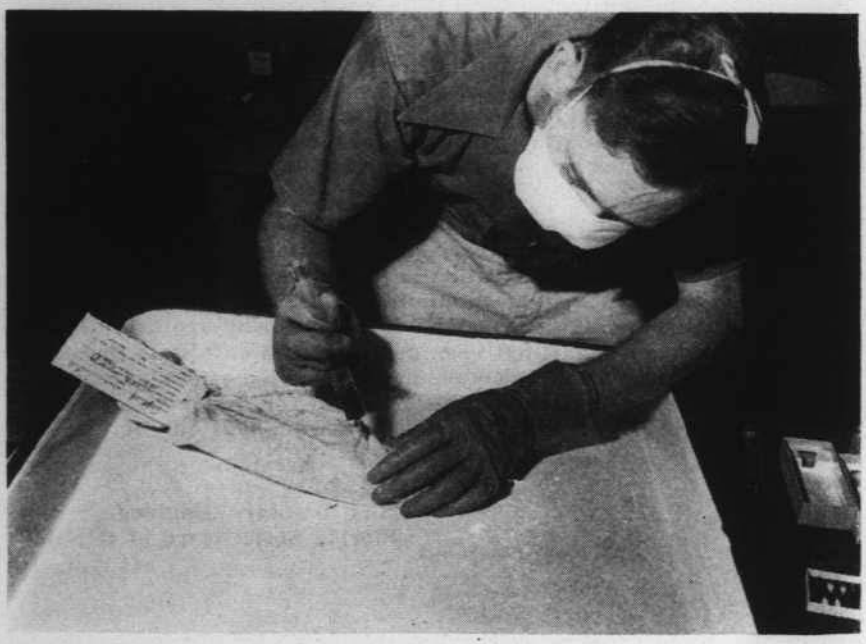
BUREAU OF SANITARY ENGINEERING
FLORIDA STATE BOARD OF HEALTH

What was probably the first case of recognized endemic (spread by the rat flea) typhus fever in Florida was reported to the State Board of Health in 1918. After that the disease was on a gradual upswing until by 1940 the number of reported cases had risen to 111.

The graph continued sharply upward with 1944 (the last year for which we have complete data as this goes to press) showing 484 cases. This was an increase of 171 cases, or 35 percent higher than in 1943.

The disease is not confined to any particular area of the State. It occurs in all sections and has been reported from 59 of the 67 counties in one or more of the years since 1939.



When directing a well-rounded typhus control program a health department must know approximately what percentage of the region's rat population is infected with typhus, as well as the possible number of carriers of the disease (the flea) the rodents harbor. Here we see George F. Baker, Engineering Aid, State Board of Health, taking blood from a chloroformed rat. Blood for such tests is sent to the National Health Institute for analysis. Picture was taken in the Rodent Control Section, Hillsborough Health Department.
(Photo by Tampa Tribune)

DEATHS

Endemic typhus fever has taken a toll of 150 lives in Florida during the ten year period 1935-44 inclusive—of which deaths 119 were white and 31 colored. There were 1,858 cases reported during this period making the ratio of deaths to cases eight per cent. This is more than double the **normal death** rate which ranges from 2 to 4 per cent. It indicates the disease may be of above average severity in Florida.

Striking as these figures are they do not tell the whole story because, on the average, probably not more than one case in five is reported by private physicians.

These two pictures show the inside and outside of a retail fish house in downtown Tampa. First, we see Otis Sessler, director of the program, inspecting a rat burrow which leads directly into the store. Inside, is assistant Wilson taking stock of the damage and estimating cost of the proposed rat-proofing job. Note that the wall to the left has been chewed by rats in half a dozen places. They made entry in not one, but many places around the door. They came in from the roof, too, and one corner of the store is black from their feet and greasy, flea-infested hair as they've traveled in and out.

(Staff photo by RSA)

HOW TYPHUS IS SPREAD

Endemic typhus fever—frequently called Brill's Disease—is primarily a disease of rats spread from rat to man by the rat flea. Practically all rats are infested with mites, lice and fleas. The fleas suck the blood of the rat and thus become infected with typhus. That is of course, if the rat in turn was infected. The whole procedure is similar to the "which comes first, the chicken or the egg" idea. The rat can't get typhus without the flea and the flea can't get typhus without the rat. Some of the fleas leave the rat and take up their abode in our homes and stores. After a time they become hungry and being no respector of persons they take their next blood meal when and where they find it. The victim may be an occupant of the home, a worker in a store or a customer coming in to make a purchase. The excreta of an infected flea contains the germs of the disease and these organisms may live in this material forty days or more after being voided by the flea.

LIFE CYCLE OF A RAT

Rats must have four things in order to live: air, water, food and shelter. Rats multiply rapidly and they thrive most where these elements are easy to obtain. Females breed at the age of three months. The gestation period is about 24 days. The average litter ranges from five to nine, and it has been calculated that a pair of healthy well fed rats could be the forebears of 1,400 rats in a single year.

It is acknowledged that the control of rats is no easy task and that it cannot be brought about over night. The job requires continuous and intelligent effort to markedly reduce their number and hold it at a low figure. Constant vigilance is the price we must pay to enjoy freedom from these pests and the disease they spread.

SYMPTOMS

About 12 to 14 days after the typhus germs get into the blood stream the affected person becomes ill with a fever. His body begins to hurt all over, as if coming down with the "flu." His head hurts, his body aches and in severe cases the pains become so agonizing that they seem unbearable and the victim reaches the point where it matters little to him whether he gets well or dies. About five days after he gets sick measle-like spots appear on abdomen and other parts of the body but not on the hands or feet.

The acute symptoms usually subside in about two weeks but the average patient is so weakened he cannot return to work for two months or longer.

Some cases of typhus fever are very mild while others result in death. Some persons never fully recover and suffer from the after effects of the disease the remainder of their lives. The after effects may be chronic headache, temporary insanity, swollen legs. The disease may cause or hasten a fatal heart attack.

TREATMENT

We know of no vaccine or immunizing agent that will give a high degree of protection against endemic typhus fever and there is no quick sureshot treatment. As the disease must be treated symptomatically the importance of calling a physician promptly must be strongly emphasized.

CONTROL OF DISEASE

In the light of the knowledge we now have, reliance for the control of the disease must be placed on bringing about a marked reduction in the rat population. The fewer rats in a city, town or community, the less are the chances of contracting typhus fever or one of the other rat-borne diseases such as bubonic plague, rat-bite fever, trichinosis, infectious jaundice, rabies, dysentery and food poisoning.

In the Hillsborough's rodent control "laboratory" Mrs. McDaniels mixes poisoned bait and water, cleans and inspects traps, and is generally important in the health department's typhus control program. Major O. J. Calderara, Sanitary Engineer and director of the Sanitation Division, examines tidbits of bait which are wrapped and ready to be turned over to the crew. *(Staff photo by RSA)*

CONTROL MEASURES TO BE INSTITUTED

Any rat control program to be successful, must be predicated on cutting down the available food supply and destroying the harboring places for rats. Storage of garbage in rat proof containers until removed by the gabage collector and its final disposal in a sanitary manner will remove one source of food supply for rats. Rat-proofing of buildings, sometimes called rat stoppage, is the most effective single measure in controlling rats. This consists of closing all openings in the roofs, ventilators, outside walls, floors and foundation walls through which rats can get inside with materials impervious to rat gnawing.

Other measures are distribution of poisoned bait, trapping and fumigation. These latter are all temporary measures and must be repeated frequently. In the end the temporary procedure will be more expensive than rat-proofing which is more permanent.

Above is a graphic picture because it shows just how a trained rat-proofing man, Geo. Bennett, Tampa, goes about "proofing" a building. He is in process of stopping a hole in the wall which rats had been using to enter this restaurant. However, most impressive feature, is the thoroughly rat-proofed door. Note the 24-gauge metal strip at bottom of door which extends just beyond the reach of an average rat. The door is screened with ordinary wire, but over that was placed the heavy half inch mesh "hardware cloth," a wire so durable that even the strong jaws and sharp teeth of the most persistent rat seldom can cut through.
(Staff photo by RSA)

Several cities and towns in the State are conducting rat and typhus control programs. Most of these projects are being operated as an activity of the regular health department program in those communities. We feel that their activity reports describe the nature and scope of their work better than anything we can say. We regret that space will not permit publishing all of them in full. Excerpts from several of them are being included together with a number of photographs taken on the job site since they show clearly what can be done to control the rat through organized continuous effort.

THE RODENT CONTROL PROGRAM OF THE HILLSBOROUGH COUNTY HEALTH DEPARTMENT

MAJOR O. J. CALDERARA, SANITARY ENGINEER (R) USPHS,
DIRECTOR, SANITATION DIVISION

The sanitation program for the control of Murine Typhus fever and other rat-borne diseases is being carried out through an established rodent control unit within the Sanitation Division of the Hillsborough County Health Department augmented by an experimental DDT flea dusting program by a U. S. Public Health Service unit.

The rat stoppage and rat eradication work of the local rodent control unit is dependent on maintaining intact the $10,000 Revolving Fund appropriated by the City of Tampa. Wages for the construction and rat eradication crews, materials and equipment needed for both types of work contracted for by business establishments, are paid out of this Revolving Fund until such times as these establishments can pay for the completed rat stoppage work.

In addition, the City of Tampa purchased and assigned a one-half ton pick-up truck for use by the rat eradication crew. The USPHS has temporarily loaned a one and one-half ton Dodge stake body truck for use of the construction crew. The bending brake used in bending the 24-gauge sheet metal belongs to the City and is mounted on this truck.

The present construction crew consists of a carpenter - foreman, carpenter - mason, and a laborer, while the rat eradication crew consists of a chief trapper, two white and one colored trappers and one woman laborer. This woman prepares all poisoned bait and

This picture shows the interior of the truck which rolls right along with the Hillsborough County's rodent control crew. It is equipped with machinery and gadgets for processing materials used in rat-proofing buildings. Here, Bill Leroy shows how he bends heavy metal strips which are placed around doors, windows and over other types of rat entrances to buildings.
(Staff photo by RSA)

water, and cleans, maintains, and brands the traps. These two crews which accomplish the rodent control work are supervised and directed by personnel of the Hillsborough County Health Department. Mr. Otis M. Sessler directly supervises the rodent control program and has two estimator-collectors and a chief rat trapper as assistants.

The ordinance, together with the $10,000 appropriated by the City inaugurating the rodent control program, was approved by former Mayor R. E. L. Chancey on August 18, 1943. This ordinance requires the rat proofing of all business buildings and provides penalties for non-compliance. Under the ordinance, the property owners are required to pay for rat proofing of buildings and the occupants or tenants to pay for cost of freeing the building of rats after they have been rat stopped and to maintain the buildings in a rat free condition. The construction work was actually started on Septmber 27, 1943. The constant labor turnover in both the construction and rat eradication crews for practically a year made it difficult to acquire trained crews and develop efficient operation.

The young man inspecting this super rat hole is an employee of the feed store inside. He is also in the process of recovering from typhus fever which he caught through the bite of fleas which had lived on typhus-infested rats. The rats in turn had lived from the Fat of the Land in the feed store. Scene was taken in the downtown section of Tallahassee, just before the Leon County Health Department's trained rat-stoppage crew rat-proofed every building in the block. *(Staff photo by RSA)*

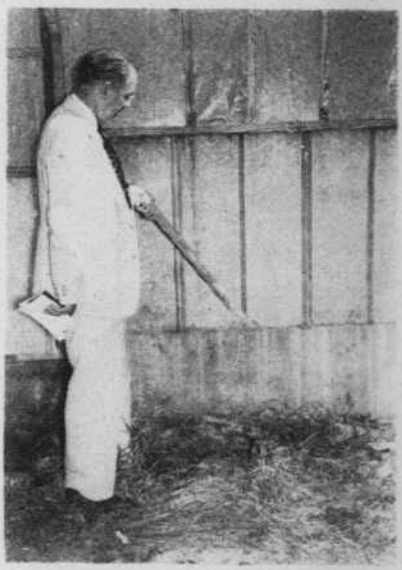
A sanitary officer first contacts the owner of the building or business establishmnt to show him the need of eliminating the ingress and egress of rats both as a public health measure and as an economic consideration, particularly in food establishments. On expression of willingness by the owner, the sanitary officer makes a rat stoppage and eradication survey to determine the amount of work to be done and its cost. All work is figured with no intention of a profit and covers the cost of materials and labor only. An agreement based on the estimated cost is then signed for rat stoppage by the owner of the building. Some occupants of buildings insist that rat infestation is not heavy and

that they will do the rat eradication work themslves. Usually these people later call up and sign for rat eradication work after a building has been rat stopped for then the imprisoned rats become more noticeable and more destructive. Because of the promotional work by the sanitary officers in trying to obtain rat stoppage agreements the merchants have come to realize that rat destruction by trapping and poisoning gives only temporary relief.

Because of the limited rodent control personnel home service to be done by the Unit is not encouraged. A minimum charge of three dollars is made for a small dwelling unit. This service covers the cost of distributing poisoned bait and gassing burrows with Cyano "A" Dust. An inspection of the home is also made and a written memorandum is left outlinging the rat proofing work needed.

As of December 1, 1945, 186 buildings have been rat stopped which include a total of 328 business establishments. The total cost of this rat stoppage work amounts to $19,470.45. 857 agreements have been made for rat eradication work including home services, at a total cost of $14,795.44. The grand total for all this work amounts to $29,512.52, which has been entirely collected. Too much emphasis cannot be made as to the importance of maintaining collections up to date. In order to do this our sanitary officers on estimating work are detailed to make collections at the end of each month to keep accounts outstanding against the Revolving Fund at a minimum. After two years of operation under difficult conditions the "Revolving Fund" remained intact.

The grand total of 14,415 rodents caught, include



And here is how a rat-proofing job looks after Ford L. Thompson, sanitary director, Leon County Health Department and his crew have finished the job. This is the same wall to which the chap recuperating from typhus, is pointing in an accompanying picture. Thomspon is pointing to where the rat hole once served its purpose. The building is now completely rat-proof. *(Staff Photo by Thompson)*

9,033 rats and 5,382 mice. The species of rats caught include 5,638 Alexandrinus, 2,748 Norway and 647 Rattus (Black). 65,035 packages of barium carbonate or red squill poisoned bait have been distributed. Blue colored arsenic water is distributed in jar caps and more extensive use of the new commercial poison 1080 will be made in the drinking water poisoning of rats when it becomes available for general use. Rat runs in buildings being rat stopped by the construction crew are now being dusted with 10 per cent DDT powder in order to quickly reduce the rat flea population.

A U. S. Public Health Service DDT flea dusting project is now being carried on in slum areas and zones showing the highest incidence of reported typhus cases. All buildings and homes within these zones will be dusted twice by June 1, 1946. In each of these zones rats are trapped alive to gain data on the effectiveness of the DDT dusting in reducing the flea infestation of rats together with rat blood determination as to the extent of murine typhus fever among the rats.

This scene is in the same block in the heart of Florida's capitol, Tallahassee. Once upon a time the door still extended to the ground, but time and weather caused the opening between foundation and earth. Even before that, however, rats had become impatient and had gnawed the hole in the door shown at the lower left hand corner. This is the rear of a food store. Rats have such strong teeth that mere wood means nothing to them when they are hungry and smell food. Only sure manner of protection against the disease-carrying rodents is the heavy metal border, shown in another picture.
(Staff Photo by Thompson)

Since the fundamental conditions for the spread of plague in cities appears to be the same as for Murne Typhus fever, DDT dusting can be used in checking the epidemic spread of plague. Hence knowledge gained in the application of DDT in this experimental control of rat fleas together with the organizational and operational experience will be of value to the Hillsborough County Health Department should plague ever be introduced in Tampa. However, should human plague begin to break out in this hemisphere, immediate expansion will be made of all the sanitation measures of port supervision, rat eradication, rat-proofing of buildings, DDT dusting, and adequate garbage disposal.

MIAMI'S MANNER OF RODENT CONTROL

BY W. HARVEY JORDAN, SUPERVISOR OF RODENT CONTROL
DADE COUNTY HEALTH DEPARTMENT

In Dade County most typhus cases occur in one or two centrally located territories. Number one being in the downtown section and number two, in the main colored section of Miami. With the releasing of the two wonder drugs, namely, "1080" and DDT, two types of Typhus Control programs are being carried on simultaneously by the Dade County Health Unit.

The new rat killer "1080" was made available through the U. S. Fish and Wild Life Service, Department of Rodent Control, about three months ago. Experimentally and in actual usage it has proven far superior to all other rodenticides previously used. It is not at all uncommon to find from 25 to 50 dead rats after a single baiting. Three men are assigned to No. 1 territory. This section is being worked systematically with a well balanced program, based on four major steps.

1. *Rat-Blocking—Vent stoppage*
2. *Rat-Harbor and food elimination*
3. *Baiting and trapping*
4. *Policing—(alley sanitation)*

After baiting a 5 and 10 cent store, 124 dead rats were picked up. "1080" was used. After baiting a theater and finding 30 dead rats, the general manager asked for information regarding rats and type of poison used. He then sent special notices to all branch theater managers, 15 in all, suggesting they carry out all rat blocking instructions immediately as baiting projects would follow. With

Here is the interior of a food store (a most coveted habitat for rats because of the many types of succulent feeds) in Tallahassee which has been thoroughly rat-proofed from outside. Here, an employee of the health department is setting a trap for the rats which may have been sealed in during the proofing process. Note the off-the-floor racks installed purposely to keep the feed above the floor. Hence, another step in thwarting rats in their foraging. Should rats chew a hole in a sack, it can be found immediately because the sack lifted from the floor, allows better visage. One sweep of the flashlight reveals the visit of the destruction - dealing animals. *(Staff Photo by Thompson)*

this type of cooperation along with "1080" the rat population in No. 1 territory will be greatly reduced.

With the cooperation of the USPHS in connection with the Florida State Board of Health, an entirely new Typhus Fever control program is being carried on in Territory No. 2. Approximately 110 square blocks of colored section has been set aside for DDT dusting. Now it is an established fact that 10 per cent DDT dust will kill fleas. And since the rat flea is the mode of transportation of typhus from rat to man, the entire colored area will be dusted. Due to the construction of the buildings, it is impracticable to rat-block houses in this area in sufficient number to reduce typhus. With the lowered standards of living and the inability to eliminate rat harbors and rat feeding grounds the DDT dusting program seems to be the most effective means of reducing the disease in this particular section.

Now here is a picture we'd like you to give considerable thought. The young man is pointing to a difficult bit of rat-proofing around a sewer pipe in the ceiling of a grocery store in Bartow. But what we want you to observe closely is the discoloration on the ceiling around the pipe. It is known as a rat run and was made by the feet and greasy coats of rats coming and going through the hole in the ceiling which is now covered by "hardware cloth." It is estimated that most of the rats which frequented this "run" were typhus infected. Should a customer be bitten by a flea which one of these infected rats have dropped in the store, he would be in for a long seige of agonizing illness. *(Staff photo by RSA)*

Three men are assigned to this territory. Trucks, labor, equipment and DDT dust are all furnished by the USPHS, through the Florida State Board of Health.

Rats are caught alive throughout this territory and combed for fleas which are in turn sent to the State Board of Halth for identification. Blood specimens are obtained from each live rat and sent to the National Institute of Health to be tested for typhus.

The purpose of trapping rats and combing the fleas is to detrmine the flea index per rat in this territory. To date the index is 7.85 fleas per rat. Each

house, barn, shed, wood pile, and store room in this territory will be dusted. With the killing effect that DDT has on fleas and the thorough way which the colored section is being dusted, there should be a shortage of rat fleas, as well as typhus fever. To date approximately 1,275 buildings have been dusted.

During November, 1,053 dead rats wre picked up in the downtown area of Miami after "1080" was distributed by the Health Department crew. The estimated number killed was around 1,300.

TYPHUS CONTROL, LEON COUNTY HEALTH DEPARTMENT

BY PAUL J. COUGHLIN, M. D., DIRECTOR
FORD L. THOMPSON, LOCAL SANITARY DIRECTOR
LEON COUNTY HEALTH DEPARTMENT

"Do you know where that rat you heard in your house came from? Do you know where the rats in your favorite store have been? What have they been doing?"

The rat is a dirty, loathsome creature. His favorite drinking spot is out of the dirtiest toilet. He eats his own young and the dead caught in traps. He leaves a greasy, nasty stain on walls and pipes where he runs. He loves the filth and wet darkness of the sewer by day. His favorite home is in dumps and the garbage heaps. After dark the nightly predator invades homes and stores alike. He runs over the fountain, licks the syrup off the spouts, plays on food and vegtable counters, finds his way over washed dishes, spreading disease that he picks up in the garbage piles and sewers as well as his own specialties, the dangerous typhus fever and dreaded jaundice.

Here is a particular bit of rat-proofing of which the health department is especially proud. Note that the vents have not only been covered by "hardware cloth" but the raw edges have also been covered by cement. This idea was worked out when it was found that "unknown persons" sometimes take sticks and pry off the screening. Here the edges are protected, and a neat appearance is also affected. Carl Heidel inspects a new job outside a grocery store in Bartow.
(Staff photo by RSA)

Business men of Tallahassee have found it unnecessary to take the financial loss from the depredations of rats or to endure the sufferings due to the bites of fleas from

typhus infected rats. What seemed to be an insurmountable problem has proven to be comparatively easy with costs low for the benefits derived. Mr. E. G. Rivers, owner of a feed, seed and farm supply store says, "Before our buildings were rat proofed and eradicated by the Leon Connty Health Department, two of my clerks had typhus fever. There have been no cases since this was done in March of 1944. Losses of the seed destroyed by rats could not be estimated since some seed was irreplaceable during war time shortages. It appeared impossible to rat proof the old wooden floored building, but the work was successful. It was the best money I ever spent."

J. Velma Keen, farm supply store owner volunteered, "Before rat proofing and rat eradication in our store we had four cases of typhus fever. There have been no cases since the work was done in 1944. The financial loss in feed, seeds and chicks due to rats has not been estimated, but the eradication of these rodents has resulted in substantial savings."

During the last year approximately ten thousand dollars has been spent by the business men for rat proofing and rat eradication. Seven thousand dollars of the money went for rat proofing of the buildings and three thousand for rat eradication in the rat proofed buildings. In addition, the Health Department supplied one full time man, a heavy ton and a half truck and complete supervision. The City of Tallahassee put up a $3,000 revolving fund to start the work; by collecting for all work in advance this was never touched. Seven blocks, which is most of the business area of the city, have been completed with the exception of two bulidings. Most of the work on the Florida State College for Women campus is completed. The next program will be on the scattered stores.

It is felt that most of the success in the project has been due to an effective ordinance which requires the owner of a business building to rat proof the building and the occupant to eradicate the rats. This divides the costs so the average cost of rat proofing per business unit has been $50, with some single ones reaching almost $200. The average cost of rat eradication per business unit has been $18. On the large college-campus buildings the average rat proofing cost has been $100 and the eradication cost $50. On a square foot basis these large buildings cost only one-tenth as much as the business houses.

Effectiveness of the rat proofing and eradication was greatly increased by completing the work block by

block. All agreements and collections for the work were made in a block before the work was started in that block. Each block was finished before going on to the next. As the blocks were rat proofed the garbage containers were rat proofed and the alley hideouts destroyed. Every effort was made to see that there was no place for a rat to stay either in the building or on the outside in the block.

Rat proofing expenses were kept low by having a complete shop on a ton and a half truck which moved to each block. On the truck was kept all tools for the handling of wood, concrete, metal and wire work. The material and tool inventory was kept up so that any job could be completed without returning to the storage room for tools or supplies. To properly conduct the work it was found desirable to keep a constant inventory of one thousand dollars worth of tools and the same in supplies.

The rat eradication work was conducted in a systematic manner. Poisons of all sorts were used. Cyanide was used on burrows and in hollow walls. Baits of many varieties were used although, as general practice it was found profitable to use the same material for bait that the rats seemed to like in that particular building. If, after trapping and poisoning the rats out of a building, others started to enter, the rat trapper and the rat proofer worked together to locate the portal of entry.

Dr. Doak S. Campbell, President of the Florida State College for Women, states: "We feel this is the way to get rid of the rat nuisance and menace. Where the rat proofing and eradication has been completed the work has been successful. We are so confident this is the answer to our rat problem that we have entered into a contract with the Leon County Health Department to rat proof and eradicate rats from every buildig on the campus."

A typhus control program can be readily carried on by a Health Department so that not only can disease be prevented but a great economic saving can be secured in a community.

RAT CONTROL IN THE CITY OF JACKSONVILLE, FLA.

BY BERNARD KOLKANA, SUPERVISOR OF RODENT CONTROL,
CITY BOARD OF HEALTH, JACKSONVILLE

For the past three years the City of Jacksonville has been carrying on an extensive rat control project as an activity of the City Health Department. The program consists of two phases of work, that is the working of business establishments and the baiting of residential, waterfronts and dumping areas. Control methods in business establishments consist of rat proofing or blocking—making the building inaccessible to rats by closing all avenus of entrance—rat harborage elimination, sanitation, and baiting or trapping; sanitary measures such as proper garbage handling, clean-up or rat harborage elimination is carried on while the rat proofing work is being done. After the above steps are completed the building is thoroughly baited. Baiting and trapping is continued until the establishment is free of rats. Usually, one thorough baiting will completely rid the premises of these pests.

The outside work consists of a periodic baiting of congested areas, both white and colored, as well as the baiting of the waterfront and dumping areas. Bait is available to the public, without cost, at our shop, 1313 Broad Street, daily. This eliminates the necessity of baiting individual residences from which complaints are received.

Since the inauguration of the rodent control program in 1943, 17,916 residences have been baited, or a total of 1,529 square blocks. A total of 2,135 business establishments have been inspected, of which number 1,415 have been rat proofed. The city rat proofed 1,217, while 198 firms did their own. The average labor cost to the city, per establishment, was $12.10, while the material cost was $4.35. Business establishments stand the cost of materials, plus an extra charge for incidentals—4,553 business establishments have been baited. For all the baiting in the city during the past three years, a total of 16,643 pounds of bait has been used, or approximately 1,286,863 individual baits have been placed.

Red Squill is the poison used for all the outside baiting, due to its specific rat killing powers. The squill has been used in a fresh fish and general bait. However, we have recently started using cooked beef lungs and cereal, due to the high prices charged for fish. The combination of either of these

baits with the poison has given good results for killing rats in the outside areas. At present experimental work is being carried on here in Jacksonville by using Antu, a new rodenticide for dusting the burrows of Norway rats. The limited results now on record look very promising. Thallium sulphate, zinc phosphide, and "1080" are the poisons, used for baiting business establishments. Good results have been attained by the use of any one of these poisons. However, for the past year "1080" has been used almost exclusively, due to its high toxicity. "1080" usually drops the rats in the open, as well as killing them quickly and effectively. Ninety-five per cent of the baiting with "1080" is by using water for the carrier. This makes a cheap bait and one that is easy and simple to handle, it eliminates the necessity of carrying a large bait bucket with from three to five different kinds of bait.

Typhus fever in the city of Jacksonville had been rising steadily before the rat control work started in 1943. Doctors and laboratories were notified when the work started and were asked to inform the Health Department of all new typhus cases. As the department was informed each case was checked, both at the home and business for evidence of rats. If rats were present at any place where the individual frequented, it was immediately systematically treated. The typhus record for Jacksonville is as follows:

1940:	1941:	1942:	1943:	1944:	1945
5	22	59	57	55	*31

*1945—Through November.

The doctors are reporting a much higher percentage of the typhus cases than they did before 1943, *nevertheless our typhus rate is definitely decreasing.*

Recently, we started dusting one section of the city with DDT dusting powder, for the control of fleas on rats. At present 54 square blocks have been dusted. The limited records on this work show that the number of fleas per rat have already been definitly decreased. The work with DDT is on an experimental basis here in the city. We hope that it will prove satisfactory for flea control as it will help to decrease typhus.

COMMENT

The increasing frequency with which endemic typhus fever is appearing in the State and its wide spread distribution make the control of this disease a public health problem of state-wide importance and of concern to all who desire protection from the ravages of this disease as well as from other diseases which are spread from rat to man.

By combing several hundred rats for parasites the flea index was found to be about 12 per rat and examination of the rat-blood samples taken showed as high as 81.4 per cent or, 8 out of 10 of the specimens to be positive for typhus. It is obvious therefore that control measures should be extended and intensified. Otherwise we may expect to see an increase in the number of cases in future years.

Adoption of ordinances by cities and towns requiring all new buildings to be of rat proof design, and that all existing structures undergoing repairs be made rat proof at the time the repairs are made, would do much to control typhus fever. These features could be incorporatd with practically no additional expense and the benefits derived in lessened loss from rat destruction and added health protection would be well worth the effort.

WITH THE KNOWLEDGE AND WEAPONS NOW AT OUR DISPOSAL HOME OWNERS, BUSINESS ESTABLISHMENTS, CITIES AND TOWNS CAN DETERMINE WITHIN CERTAIN LIMITS HOW MANY RODENTS THEY WISH TO FEED AND HARBOR, EACH ONE OF WHICH IS A POTENTIAL HAZARD TO HEALTH.

ENDEMIC TYPHUS FEVER
CASES AND DEATHS REPORTED
STATE OF FLORIDA
BY YEARS—10-YEAR PERIOD—1935-1944 INCLUSIVE

YEAR	CASES REPORTED	DEATHS		
		WHITE	COLORED	TOTAL
1935	27	5	0	5
1936	55	9	0	9
1937	131	11	1	12
1938	75	8	2	10
1939	152	6	1	7
1940	111	9	6	15
1941	196	12	1	13
1942	313	16	7	23
1943	314	16	6	22
1944	484	27	7	34
TOTAL	1858	119	31	150

BARTOW, FLORIDA

DR. L. M. ZELL, DIRECTOR POLK COUNTY HEALTH UNIT

Four cases of Typhus fever, all in Bartow, were reported in Polk County in 1944. Two of the individuals afflicted were prominent Bartow citizens. This stirred the community to action and Bartow began 1945 by passing a model rat control ordinance on January 2.

This year (1945), twenty cases of typhus fever, with one death, have been reported in the county. Ten cases of typhus occurred in Bartow during the first five months of this year, whereas only one case has been reported since June.

There are approximately 100 business establishments in Bartow and seventy-five have been rat-proofed. All county buildings were rat-proofed at the beginning of the program.

At a recent meeting, the City Council instructed the City Health Officer and the City Attorney to enforce the ordinance and to see to it that the program is carried through to completion.

The work of the Typhus Control Program is probably very similar to that in other communities but the setup is unusual. Polk County has fourteen incorporated municipalities and hoping that all would sooner or later enter into a rat-control program, the typhus unit was set up on a county-wide basis within the County Health Department. There is no municipal financing, direction or control, since the revolving fund was established by the Board of County Commissioners.

Here is a window screen made from 'hardware cloth," and banded by a heavy metal, guaranteed to keep the most persistent rat outside. This is a special sort of screen thought up by the boys of the rat-proofing crew in Bartow, with fire ordinances in mind. Here we see Carl Heidel, right, director of the eradication work, with a CPS helper from a near-by camp, putting the finishing touches to a screen for the juvenile home.

(Staff photo by RSA)

The typhus control unit will operate in any community within the county that will pass and enforce a satisfactory rat control ordinance.

The unit was begun under the direction of Mr. W. P. Griffin, who recently transferred to Pensacola and Mr. Carl Heidel is now in charge.

COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Alachua	Gainesville, Florida	Frank M. Hall, M.D.
Bay	Panama City, Florida	Thos. G. Faison, M.D.
Broward	Ft. Lauderdale, Florida	Wm. C. Hatchett, M.D.
Dade	Miami, Florida (Court House)	T. E. CATO, M.D.
Duval	Jacksonville, Florida	L. L. Parks, M.D.
Hillsborough	Tampa Florida	Frank V. Chappell, M.D.
Jefferson	Monticello, Florida	F. A. Brink, M.D.
Leon	Tallahassee, Florida	Paul J. Coughlin, M.D.
Levy	Bronson, Florida	(Temporarily vacant)
Monroe	Key West, Florida	James B. Parramore, M.D.
Orange	Orlando, Florida	Leland H. Dame, M.D.
Pinellas	St. Petersburg, Florida	R. D. Hollowell, M.D.
Polk	Bartow, Florida	Lawrence M. Zell, M.D.
Seminole	Sanford, Florida	Frank L. Quillman, M.D.
Volusia	DeLand, Florida	R. D. Higgins, M.D.
Baker Nassau	MacClenny, Florida Fernandina, Florida	John W. McClane, M.D.
Bradford Clay Union County	Starke, Florida Green Cove Springs, Florida (Attached to Bradford)	Aubrey Covington, M.D.
Escambia Santa Rosa	Pensacola, Florida Milton, Florida	T. W. Reed, M.D.
Gadsden Liberty	Quincy, Florida (Attached to Gadsden)	(Temporarily vacant)

COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Jackson Washington Calhoun	Marianna, Florida Chipley, Florida (Attached to Jackson)	C. A. Adams, Jr., M.D.
Lake Sumter	Tavares, Florida Bushnell, Florida	R. J. Dalton, M.D.
Madison Taylor	Madison, Florida Perry, Florida	C. A. O'Quinn, M.D.
Franklin Gulf Wakulla	Apalachicola, Florida Port St. Joe, Florida Crawfordville, Florida	Terry Bird, M.D.
Holmes Walton Okaloosa	Bonifay, Florida DeFuniak Springs, Florida Crestview, Florida	(Temporarily vacant)
Highlands Glades Okeechobee	Sebring, Florida Moore Haven, Florida (Attached to Highlands)	James H. Well, M.D.
Northern District	Lake City, Florida	Robert F. Sayre, M.D.
Central District	Ocala, Florida	(Temporarily vacant)
Southeastern District	Vero Beach, Florida	S. J. Williams, M.D.
Southwestern District	Arcadia, Florida	(Temporarily vacant)
Suwannee Dixie LaFayette	Live Oak, Florida (Attached to Suwannee) (Attached to Suwannee)	(Temporarily vacant) (Temporarily vacant) (Temporarily vacant)

Note: Entire state covered.

An estimated 44 million dollars worth of property is destroyed by rats in FLORIDA every year. Meanwhile typhus fever, transmitted by the rat flea is on the increase and promises, if not checked through control of the rat, to be among the State's major health problems. *(Cartoon by staff artist Brunetti)*

Florida HEALTH NOTES

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VENEREAL DISEASE CONTROL

The State Board of Health

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County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Broward	Ft. Lauderdale
Clay	Green Cove Springs
Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Monticello
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Pinellas	Clearwater
Polk	Bartow
Santa Rosa	Milton
Seminole	Sanford
Sumter	Bushnell
Taylor	Perry
Volusia	DeLand
Wakulla	Crawfordville
Walton	DeFuniak
Washington	Chipley

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Bureau of Prenventable Diseases
R. F. Sondag, M.D.

Div. of Venereal Disease Control

Division of Epidemiology

Bureau of Malaria Control
John A. Mulrennan

Malaria Research
Mark F. Boyd, M.D.
Rockefeller Foundation
Tallahassee

Florida HEALTH NOTES

ESTABLISHED 1890

"We must not fall into the error of thinking that promiscuity and prostitution should be corrected only to prevent venereal disease. Prostitution is also a social and economic evil, and like promiscuity, threatens the basic unit of our society, the American family. If ever in our time we are going to clean up the situation, now is the time to do it."

DR. THOMAS PARRAN
Surgeon General, United States Public Health Service, Federal Security Agency

—o—

"During the war period, tremendous gains have been made in the control of venereal disease and the prevention and repression of prostitution and related activities. Millions of young men have been kept disease-free to fight for the freedom of our country. When they return, they have the right to demand the kind of communities in which they and their families can live decently. It is our responsibility to do all that is humanly within our power to assure those conditions permanently in communities throughout America."

DR. WILLIAM F. SNOW, M.D.
Chairman of the Executive Committee
American Social Hygiene Association

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VENEREAL DISEASE CONTROL IN FLORIDA

R. F. SONDAG, M. D., *Director*
Bureau of Preventable Diseases

Tempus Fugit! In this issue a year ago, emphasis was placed on hastening V-Day over VD. Since that time, we have seen V-E Day and V-J Day, but V-Day over VD is one battle which remains to be won. During the war, important gains were made on all fronts—medical, educational, moral and community action. Now that hostilities have ceased, it is the feeling of many that the consolidated lines and effective barriers built on sound public health principles need not be extended into the post-war era. In many areas where there has been an almost complete crackdown on organized prostitution, there has been a tendency to ease up now that the war is over. There are no indications that regress will be made on the medical and educational fronts. Medical science continues its unrelenting warfare on the two most prevalent venereal diseases—syphilis and gonorrhea. Education, too, continues right in stride with medical science by informing young and old alike of the needless waste and misery caused by venereal diseases. Considerable reinforcements though are needed on the moral and community action fronts. The moral aspect of Venereal Disease Control is rightfully the responsibility of the home, church, and the school. We must emphasize again that what is still lacking is not the quality of the effort made, but the quantity, particularly on the moral and community action fronts. In 1918 a general relaxing of measures to curtail venereal diseases followed the Armistice and the rate of infection reached epidemic proportions. We must not let this history repeat itself. A similar upswing is already beginning. Now that all hostilities have ceased, it it believed that the VD rate in the United States will rise. This anticipated increase in venereal diseases forecasts the extent of the VD control problem to be faced by civilian agencies in the immediate future. During the war, the Army and Navy had control over eight million men and carried out a comprehensive VD Control Program. During the past six months and during the next six to eight months, over five million of these men, all in the age groups with the highest incidence of venereal diseases, will be discharged to civilian life. The Army has taken steps to make sure that the number of men discharged with infectious venereal diseases will be held to a minimum. Civilian

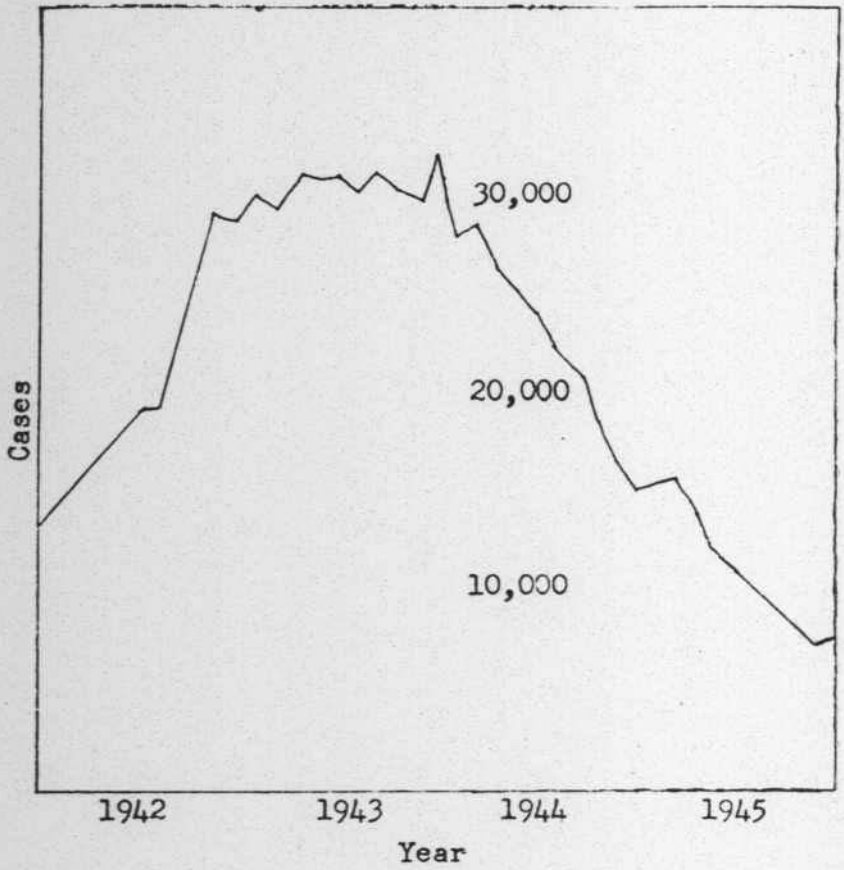
agencies, health departments, and private physicians must accept the responsibility of this increased burden by providing substitute VD control procedures of at least comparable intensiveness. Failure to do so will almost surely result in increased civilian rates.

In each large Separation Center Public Health representatives are stationed to interview all separated veterans with a positive blood test or a history of syphilitic infection, before or during the veteran's career. Before these men are separated, they are instructed to report to a nearby Rapid Treatment Center. If their disease is not in an infectious stage, they are instructed to report to the nearest health department, if additional examination and follow-up work are indicated.

At the beginning of the past year, the new drug Penicillin was used rather sparingly, but as the year progressed, this drug became available in increasing amounts, enabling more patients to be treated with this new therapeutic agent. Penicillin, prior to April 1st, was only available to the Rapid Treatment Centers, but after this date, it was distributed to all health departments, venereal disease clinics, and private physicians for the treatment of gonorrhea. During the month of April, too, the four-hour treatment schedule for the treatment of gonorrhea was introduced to health departments, clinics, and private physicians. The treatment of syphilis with penicillin requires injections at three-hour intervals for approximately ten days, patients while under treatment requiring hospitalization and constant medical supervision; thereby precluding the use of this drug on an ambulatory basis in health departments, clinics, and private physicians' offices. The Bureau of VD Control, therefore, does not distribute Penicillin for the treatment of syphilis, and these patients must be referred to the Rapid Treatment Centers for their treatments. With the introduction of the four-hour treatment schedule for gonorrhea and the ease with which this treatment can be carried out in the health departments, clinics, and private physicians' offices, all health departments were requested to treat all gonorrhea patients in their clinics. After July 1st, admissions to the Rapid Treatment Centers were restricted to syphilis patients only. Since the earlier forms of syphilis are more amenable to the intensive types of therapy, admissions to the Rapid Treatment Centers were limited to primary, secondary, and early latent syphilis. Early congenital syphilis and asymptomatic neurosyphilis patients were also acceptable for admission in the Rapid Treatment Centers. A glance at the table presented in this issue

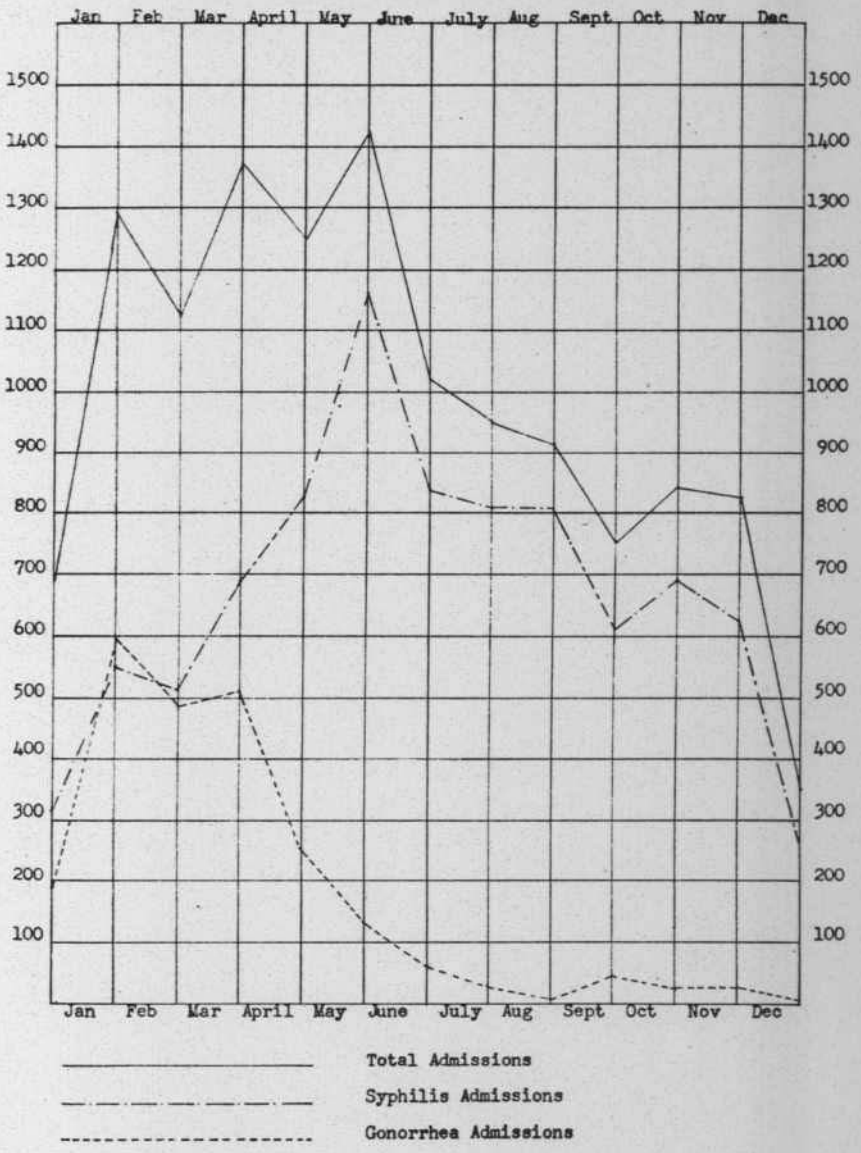
will disclose that there has been a marked decrease in the case load of the clinics throughout the State. This does not necessarily mean that the clinics no longer have any work to do. On the contrary, they are about as busy now as they were when the case load was at its peak. Emphasis is now placed on referring patients to the Rapid Treatment Centers, rather than treating patients by the standard fifty-two week method. Clinics are now being used more for the diagnostic and follow-up activities rather than for treatment. From statistics thus far presented, we can be assured that at least 90% of the patients admitted to the Rapid Treatment Centers for syphilitic treatment finished the prescribed

GRAPH 1—NUMBER OF CASES OF VENEREAL DISEASE UNDER TREATMENT IN CLINICS BY MONTH, 1942-1945



course; whereas, less than 25% of the patients treated on an out-patient basis by means of the standard fifty-two week method finished the prescribed course.

GRAPH 2—NUMBER OF CASES OF VENEREAL DISEASE ADMITTED TO FLORIDA RAPID TREATMENT CENTERS DURING 1945, BY MONTH



Although there was no decrease in the total number of anticipated admissions at the Rapid Treatment Centers, it was decided to close the Rapid Treatment Center at Wakulla. A few patients were admitted during the month of January, but by March 31st this center was entirely closed and all equipment moved to other centers. With the closing of the Wakulla Center, the Florida State Board of Health assumed responsibility of operating the Gulf Coast Medical Center at Pensacola. After one complete year of operating this center, arrangements were made the latter part of December to close this center, and all patients eligible for admission to Rapid Treatment Centers are now being referred either to the center at Jacksonville or Ocala. A review of the tables and charts accompanying this essay will reveal that the vast majority of patients formerly treated in clinics are now being treated in the Rapid Treatment Centers. This has reduced the case load in the clinics so that health officers are able to devote more time to other important health activities, and VD clinicians can now devote more timeto diagnosis, contact tracing, and follow-up activities.

During 1945 the Legislature met and enacted into law a Premarital and Prenatal Bill which became effective on October 1st. Although approximately three months' time was allowed to prepare for the provisions of these laws, considerable delays were encountered in having the various forms printed, which, in turn, delayed the distribution of these forms. As with many new laws, considerable confusion was at first experienced throughout the State in interpreting and carrying out the provisions of the laws, but after a few weeks' operation, very few complaints were registered, and the laws are now taken in stride. Tables showing the number of persons examined under the Premarital and Prenatal Laws are presented in this issue.

Now that the war is over, everyone should hold firmly to the great public health and law enforcement gains made during the war and pledge greater confidence and determination in an all-out effort to emphasize the moral and community action fronts. This must be done by everyone, if good conduct and moral standards are to be upheld. Failure to do so will interrupt the gains made in the control of venereal diseases and almost surely place Florida back on the unenviable list of states with high VD rates. This should never happen.

TABLE 1—NUMBER OF CASES OF SYPHILIS AND GONORRHEA REPORTED BY COUNTY, 1941-1945 —

County	1941		1942		1943		1944		1945	
	Syp.	Gon.	Syp.	Gon.	Syp.	Gon.	Syp.	Gon.	Syp.	Gon.
Alachua	378	19	965	105	784	118	348	65	307	187
Baker	118	6	76	20	45	10	31	25	30	13
Bay	241	34	412	255	553	422	437	454	323	868
Bradford	284	19	182	97	199	86	193	97	134	114
Brevard	122	6	168	2	419	91	73	33	120	40
Broward	797	54	773	110	742	231	479	258	349	210
Calhoun	1	0	26	2	48	5	9	1	6	1
Charlotte	29	3	170	8	65	33	15	17	5	15
Citrus	20	10	17	0	170	11	13	7	16	30
Clay Ex.	142	19	62	61	108	48	155	66	40	59
Camp Blanding	176	899	329	1478	316	1875	69	91	143	42
Collier	58	2	190	1	35	14	23	3	18	41
Columbia Ex.	84	10	59	8	714	24	88	31	64	48
Gov't Hospital					69	2	17	0		
Dade	3228	485	4229	522	4459	1349	2588	2016	1724	2444
DeSoto	68	1	264	14	166	47	53	50	43	41
Dixie	18	0	74	1	215	0	14	5	27	39
Duval	2973	419	3516	2115	6214	3032	3909	1826	2470	2387
Naval Air Base	27	93	31	428	36	503	43	529	62	706
Escambia	765	260	661	514	792	1127	812	1487	641	1934
Flagler	81	5	79	11	94	8	108	55	173	70
Franklin	117	2	96	30	117	158	142	675	85	184
Gadsden Ex.	259	11	199	56	299	40	120	53	348	296
State Hospital	231	0	172	0	183	1	159	0	155	2
Gilchrist	99	1	42	0	4	1	1	0	4	5
Glades	174	5	110	7	18	8	32	6	29	3
Gulf	252	8	148	16	143	13	84	13	46	21
Hamilton	223	18	77	50	3	0	3	6	14	11
Hardee	34	0	95	17	36	5	34	10	16	9
Hendry	3	0	205	6	181	57	135	24	240	25
Hernando	20	0	53	0	142	2	9	5	3	11
Highlands	211	3	344	35	299	260	183	280	107	153
Hillsborough	1827	221	2437	803	2920	1430	1417	1815	1205	2176
Holmes	6	0	18	1	51	0	51	14	30	5
Indian River	47	2	210	11	279	16	68	22	153	40
Jackson	342	30	237	109	211	133	113	164	50	169
Jefferson	112	0	432	42	201	64	78	47	79	101
Lafayette	4	0	7	1	14	0	4	1	2	0
Lake	382	8	611	97	380	95	201	96	199	121
Lee	62	1	650	108	286	39	149	41	101	127
Leon	438	50	659	1111	450	687	359	1128	309	1123
Levy	679	1	301	15	152	62	10	3	65	26
Liberty	1	0	4	0	7	1	0	1	1	3
Madison	84	0	235	13	476	38	16	4	118	40
Manatee	175	3	503	35	218	187	178	84	184	241
Marion	262	6	359	27	1026	77	263	111	242	399
Martin	47	0	66	2	95	8	7	0	83	19
Monroe	38	24	147	80	308	171	142	220	117	228
Nassau	246	9	309	59	201	126	114	102	90	36
Okaloosa	4	14	140	24	171	248	61	224	42	164
Okeechobee	13	0	2	2	72	0	36	12	18	16
Orange Ex.	791	133	1023	629	850	846	580	313	781	415
Fla. T. B. Sanat.					2	1	2	0		
Osceola	48	6	132	3	113	9	6	4	16	6
Palm Beach	1479	41	1245	258	1274	335	2324	353	2069	814
Pasco	66	0	114	2	175	4	55	3	31	5
Pinellas	1087	38	1111	277	927	596	370	319	268	279
Polk	421	2	690	34	1135	245	526	161	552	336
Putnam	45	2	401	6	320	39	82	37	193	67
Saint Johns	59	0	264	10	213	36	137	44	222	71
Saint Lucie	229	2	127	14	339	105	165	42	160	115
Santa Rosa	81	4	58	27	55	18	33	88	13	38
Sarasota	233	14	570	83	181	46	139	53	91	78
Seminole	215	6	1169	104	589	210	335	197	546	175
Sumter	43	1	227	14	190	165	85	6	93	24
Suwannee	55	4	259	9	377	10	9	4	34	17
Taylor	132	18	301	75	127	58	62	110	26	17
Union	4	4	24	1	20	1	11	7	15	12
State Prison					238	5	89	2	144	0
Volusia	129	8	944	83	660	260	310	186	350	460
Waukulla	94	0	85	15	111	290	16	21	15	11
Walton	43	4	164	12	46	45	58	69	55	48
Washington	2	0	45	0	141	22	47	55	42	57
Quarantine Hosps.					271	616				
Grand Total	21258	3048	30104	10165	33546	16925	19087	14351	16546	18088

(Out of State Cases Excluded)

TABLE 2—NUMBER OF VENEREAL DISEASE CASES REPORTED IN FLORIDA, BY DISEASE AND YEAR 1941-1945

Year	Syphilis	Gonorrhea	Chancroid	Granuloma Inguinale	Lymphopathia Venereum
1941	21,258	3,048	154	76	49
1942	30,104	10,165	453	135	124
1943	33,540	16,295	844	251	254
1944	19,087	14,351	535	217	248
1945	16,546	18,088	722	244	197

(Out of State Cases Excluded)

TABLE 3—MONTHLY AVERAGE OF PATIENTS UNDER TREATMENT IN CLINICS IN FLORIDA, BY YEAR 1941-1945

Year	Monthly Average of Patients Under Treatment in Clinics
1941	12,600
1942	20,131
1943	30,655
1944	22,059
1945	11,481

TABLE 4—NUMBER OF VENEREAL DISEASE CASES* UNDER TREATMENT IN CLINICS BY MONTH, 1942-1945

	Year			
Month	1942	1943	1944	1945
January	13,393	30,218	27,943	16,475
February	14,317	29,956	28,631	16,932
Mareh	15,715	31,311	26,117	14,677
April	16,912	31,156	25,611	12,711
May	18,186	31,255	24,475	12,413
June	19,248	31,296	21,538	11,020
July	19,461	30,710	19,823	10,781
August	22,600	31,412	19,864	9,708
September	24,633	30,472	18,287	8,365
October	27,743	30,008	18,303	8,805
November	29,236	30,076	17,943	7,890
December	29,227	32,285	16,172	**8,000
Total	250,671	370,105	264,707	137,777

*Includes Rapid Treatment Centers.
**Estimated.

TABLE 5—SEROLOGIC TESTS FOR SYPHILIS AND MICROSCOPIC EXAMINATIONS FOR GONORRHEA—FLORIDA STATE LABORATORIES, 1941-1945

Year	Syphilis	Gonorrhea
1941	908,360	43,591
1942	1,239,399	58,936
1943	948,299	89,249
1944	839,200	107,915
1945	761,837	106,360*

*Includes 25,725 cultures.

TABLE 6—DISTRIBUTION OF DRUGS AS TO SOURCE AND KIND FURNISHED FOR 1943-1944-1945

Drugs	Distributed to Private Physicians			Distributed to Clinics, Hospitals & Others			Total Distributed		
	1943	1944	1945	1943	1944	1945	1943	1944	1945
Mapharsen (in doses)	54,877	36,270	13,080	536,510	398,820	234,680	591,387	435,090	247,760
Neoarsphenamine (in doses)	9,492	3,260	1,340	31,000	9,095	2,165	40,492	12,355	3,505
Sulfarsphenamine (in doses)	370	155	5	3,640	2,760	1,045	4,010	2,915	1,050
Tryparsamide (in doses)	500	940	380	9,190	10,550	4,780	9,690	11,490	5,160
Bismuth (in cc)	77,260	37,470	14,040	743,430	517,720	264,790	820,690	555,190	278,830
Sulfathiazole (in grams)	21,500	4,000	1,000	588,000	1,055,000	199,190	609,500	1,059,000	200,190
Distilled Water (in cc)	552,200	318,600	144,300	3,083,300	3,048,900	2,783,200	3,635,500	3,367,500	2,927,500
Penicillin (in vials*)	0	0	747	0	10,920	107,862	0	10,920	108,609

(*100,000 Oxford units to the vial)

TABLE 7—ADMISSIONS AND READMISSIONS TO FLORIDA RAPID TREATMENT CENTERS, ACCORDING TO DISEASE, STAGE OF INFECTION, RACE AND SEX, BY CENTER, BY MONTH, 1945

Center	Month	DISEASE AND STAGE OF INFECTION													Total Admissions and Readmissions	RACE		SEX	
		Primary and Secondary Syphilis	Early Latent Syphilis	Late and Late Latent Syphilis	Congenital Syphilis	All Other Syphilis	Total Syphilis	Gonorrhea Alone	Other Venereal Diseases	Diagnostic and Post Treatment Observation	No Venereal Disease	Syphilis Readmissions	Gonorrhea Readmissions	Total Readmissions		White	Non-White	Male	Female
Ocala Rapid Treatment Center																			
	January	38	279	18	8	6	349	194	11	4	8	4	0	4	570	143	427	244	326
	February	50	235	17	31	10	343	152	12	4	9	0	0	0	520	123	397	217	303
	March	52	277	62	17	35	443	146	6	4	29	0	0	0	628	161	467	283	345
	April	55	404	84	13	0	556	42	8	0	47	7	8	19	672	95	577	323	349
	May	78	601	111	36	0	826	24	5	0	37	8	6	16	908	78	830	517	391
	June	53	413	67	25	0	559	14	10	0	41	14	4	21	645	76	569	290	355
	July	67	344	66	36	46	559	20	10	15	45	5	3	9	658	74	584	327	331
	August	82	408	45	23	25	583	8	6	8	36	7	3	10	651	47	604	373	278
	September	51	302	33	8	33	427	17	10	8	39	12	2	14	515	51	464	275	240
	October	93	251	33	25	36	438	15	6	14	30	11	1	12	515	85	430	241	274
	November	86	209	27	12	40	374	15	2	65	44	9	5	15	515	77	438	255	260
	December	63	54	10	4	9	140	6	8	17	21	9	2	11	203	56	147	122	81
	Sub-Total	768	3777	574	238	240	5597	653	94	139	386	86	34	131	7000	1066	5934	3467	3533
Pensacola Rapid Treatment Center																			
	January	53	58	13	7	3	134	253	1	0	9	9	70	79	476	224	252	171	305
	February	50	45	10	7	1	113	214	11	0	6	3	48	52	396	158	238	128	268
	March	63	69	26	8	0	158*	220	7	0	15	13	65	79	479	172	307	193	286
	April	60	96	20	7	4	187	115	0	0	5	7	38	51	358	122	236	144	214
	May	61	137	43	18	0	259	61	0	0	9	16	23	39	368	111	257	165	203
	June	60	91	21	12	0	184	39	0	0	9	16	23	51	358	122	236	144	214
	July	40	90	12	9	2	153	8	1	0	7	3	0	3	172	23	149	70	102
	August	35	67	22	7	6	137	4	2	0	8	4	0	4	155	20	135	58	97
	September	46	45	5	6	9	111	22	4	0	0	4	0	4	141	39	102	61	80
	October	56	73	8	6	12	155	12	4	0	6	6	0	6	183	56	127	71	112
	November	55	62	19	3	15	154	12	7	0	4	6	0	6	183	49	134	83	100
	December	18	17	3	3	3	44	2	1	0	6	4	0	4	57**	14	43	24	33
	Sub-Total	597	850	202	93	55	1789*	962	38	0	81	91	254	353	3223	1076	2147	1280	1943

TABLE 7—ADMISSIONS AND READMISSIONS TO FLORIDA RAPID TREATMENT CENTERS, ACCORDING TO DISEASE, STAGE OF INFECTION, RACE AND SEX, BY CENTER, BY MONTH, 1945—(Continued)

Center	Month	DISEASE AND STAGE OF INFECTION													Total Admissions and Readmissions	RACE		SEX	
		Primary and Secondary Syphilis	Early Latent Syphilis	Late and Late Latent Syphilis	Congenital Syphilis	All Other Syphilis	Total Syphilis	Gonorrhea Alone	Other Venereal Diseases	Diagnostic and Post Treatment Observation	No Venereal Disease	Syphilis Readmissions	Gonorrhea Readmissions	Total Readmissions		White	Non-White	Male	Female
Jacksonville Rapid Treatment Center																			
	January	28	20	16	7	0	71	148	3	0	2	20	2	23	247	139	108	106	141
	February	24	15	19	3	0	61	126	2	0	3	11	5	17	209	107	102	99	110
	March	31	41	18	7	0	97	144	1	0	3	10	3	15	260	115	145	117	143
	April	28	26	28	3	1	86	110	2	0	5	12	1	14	217	95	122	92	125
	May	32	20	22	2	0	76	49	2	0	2	14	0	16	145	84	61	62	83
	June	33	27	25	9	0	94	9	0	0	4	13	0	13	120	55	65	45	75
	July	27	25	21	4	19	96	4	0	16	1	4	0	4	121	64	57	54	67
	August	21	17	23	2	22	85	3	2	11	3	9	0	9	113	70	43	41	62
	September	30	13	21	0	12	76	4	2	9	2	7	0	7	100	55	45	46	54
	October	44	26	18	3	14	105	3	2	10	8	17	0	17	145	76	69	80	65
	November	40	23	15	3	12	93	3	1	14	8	8	0	8	127	62	65	77	50
	December	39	18	6	0	3	66	3	0	2	13	5	0	5	89	44	45	50	39
	Sub-Total	377	271	232	43	83	1006	606	17	62	54	130	11	148	1893	966	927	879	1014
Total All Centers																			
	January	119	357	47	22	9	554	595	15	4	19	33	70	106	1293	506	787	521	772
	February	124	295	46	41	11	517	492	25	4	18	14	53	69	1125	388	737	444	681
	March	146	387	106	32	35	698*	510	14	4	47	23	68	94	1367	448	919	593	774
	April	143	526	132	23	5	829	267	10	0	57	26	47	84	1247	312	935	559	688
	May	171	758	176	56	0	1161	134	7	0	48	38	29	71	1421	273	1148	744	677
	June	146	531	114	46	0	837	62	10	0	51	43	14	60	1020	219	801	447	573
	July	134	459	99	49	67	808	32	11	31	53	12	3	16	951	161	790	451	500
	August	138	492	90	32	53	805	15	10	19	47	20	3	23	919	127	792	472	447
	September	127	360	59	14	54	614	43	16	17	41	23	2	25	756	147	609	383	373
	October	193	350	59	34	62	698	30	12	24	44	34	1	35	843	217	626	392	451
	November	181	294	61	18	67	621	30	10	79	56	23	6	29	825	188	637	415	410
	December	120	89	19	7	15	250	11	9	19	40	18	8	20	349	114	235	196	153
	Total	1742	4898	1008	374	378	8392	2221	149	201	521	307	304	632	12116	3100	9016	5617	6499

*Apparent error in Pensacola's report. Total figures are correct.
**Pensacola RTC closed December 31, 1945. No patients were admitted after December 21, 1945.

TABLE 8—NUMBER AND RESULT OF SEROLOGIC TESTS FOR SYPHILIS PERFORMED IN COMPLIANCE WITH PREMARITAL AND PRENATAL BOOD TEST LAW, BY MONTH, FLORIDA STATE LABORATORIES

Month	Premarital				Prenatal			
	Positive	Negative	Doubtful	Total	Positive	Negative	Doubtful	Total
October	131	2,168	16	2,315	75	1,341	7	1,423
November	191	2,931	42	3,164	92	2,001	13	2,106
December	231	3,082	47	3,360	57	1,714	14	1,785
Total	553	8,181	105	8,839	224	5,056	34	5,314
Percent	6.25	92.56	1.19	100	4.22	95.13	.65	100

TABLE 9—MARRIAGES PERFORMED BY COUNTIES, BY MONTHS, OCTOBER TO DECEMBER, 1943, 1944, 1945

Counties	October			November			December		
	1943	1944	1945*	1943	1944	1945*	1943	1944	1945*
State	4253	3639	1883	3968	3691	2412	4605	4175	2929
Alachua	56	28	36	62	34	22	74	39	34
Baker	63	71	2	53	55	1	64	74	2
Bay	70	56	22	90	67	22	92	91	19
Bradford	42	38	16	21	31	23	33	37	18
Brevard	30	37	23	28	35	22	25	50	30
Broward	226	193	98	203	164	121	232	195	165
Calhoun	9	12	3	10	6	3	15	14	6
Charlotte	13	9	6	8	13	2	19	16	11
Citrus	9	10	5	18	4	9	6	18	11
Clay	26	35	13	29	39	13	33	45	10
Collier	11	15	3	11	21	4	10	22	1
Columbia	25	24	19	29	25	16	27	47	12
Dade	552	469	362	473	481	442	528	553	514
DeSoto	13	7	2	13	9	8	20	16	12
Dixie	10	4	1	7	7	3	3	9	7
Duval	487	444	219	476	453	294	522	472	295
Escambia	276	230	97	228	216	119	238	223	150
Flagler	16	24	8	17	20	12	28	31	6
Franklin	21	20	4	27	19	6	22	25	13
Gadsden	42	27	6	26	30	16	44	31	16
Gilchrist	12	13	3	5	9	4	12	9	11
Glades	18	8	1	8	14	9	10	10	8
Gulf	9	14	1	5	15	3	18	17	3
Hamilton	13	13	1	8	14	2	9	12	1
Hardee	16	11	13	18	19	21	21	25	20
Hendry	6	9	2	4	10	3	8	4	6
Hernando	22	17	4	20	16	18	16	9	21
Highlands	53	39	16	38	44	21	71	52	20
Hillsborough	392	311	204	373	339	252	461	375	334
Holmes	19	15	2	14	10	4	13	15	5
Indian River	20	29	8	20	25	16	27	40	16
Jackson	33	49	6	51	40	6	44	56	18
Jefferson	13	6	4	15	22	4	15	17	6
Lafayette	7	3	1	3	3	3	3	5	3
Lake	33	37	17	43	34	18	38	34	24
Lee	44	43	16	55	44	21	75	47	27
Leon	101	79	19	116	83	20	108	85	37
Levy	10	16	2	18	9	6	1	8	11
Liberty	3	4	1	1	2	1	6	0	0
Madison	24	13	7	11	17	8	20	26	7
Manatee	41	24	15	53	44	22	64	32	39
Marion	50	33	16	51	36	22	64	29	35
Martin	23	11	5	18	19	8	30	11	12
Monroe	49	51	18	52	67	38	54	42	49
Nassau	24	23	5	21	23	5	26	29	3
Okaloosa	45	36	12	38	35	6	44	52	8
Okeechobee	6	12	3	24	8	5	10	5	12
Orange	184	139	94	173	129	133	167	145	151
Osceola	39	32	11	24	32	23	45	36	19
Palm Beach	166	117	85	154	147	88	214	167	130
Pasco	25	21	16	26	31	25	24	27	38
Pinellas	159	158	85	143	130	104	183	143	107
Polk	143	123	69	142	127	120	176	147	154
Putnam	36	32	9	20	34	18	35	36	26
St. Johns	59	50	23	50	34	16	60	42	26
St. Lucie	35	38	11	37	36	13	45	48	19
Santa Rosa	41	32	10	40	26	18	41	28	17
Sarasota	48	29	16	44	30	27	57	36	31
Seminole	57	52	17	45	43	35	64	62	25
Sumter	12	17	9	21	17	7	17	24	4
Suwannee	29	15	11	13	10	7	30	24	7
Taylor	15	4	4	15	4	4	22	23	6
Union	8	15	0	9	11	1	11	21	3
Volusia	65	61	59	62	78	53	59	64	69
Wakulla	9	6	0	12	11	3	6	7	5
Walton	10	8	2	11	12	7	13	20	8
Washington	30	18	5	15	19	6	23	21	16

*1945 figures are provisional.

TABLE 10—BUREAU OF VENEREAL DISEASE CONTROL—ANNUAL REPORT—1945

Reported Cases of Syphilis according to Stage of Infection, Pregnancy Status, Race and Sex, Source of Reference and Age Groups, by Counties and for State

County	By Stage of Infection									Pregnancy	By Race & Sex						Source of Ref.		By Age Group							
					Late						White		Colored													
	Primary	Secondary	Early Latent	Late Latent	Other	C. N. S.	Cong.	Not Stated	Total		M.	F.	M.	F.	Not Stated	Total	*Clinic	or Inst. Priv. M.D.	Not Stated	0-9	10-19	20-29	30-39	40-49	50-over	Total
Alachua	12	36	174	48	6	20	8	3	307	3	12	17	135	141	2	307	301	6	11	3	60	127	60	26	20	307
Baker	0	1	7	2	0	1	0	19	30	1	1	4	5	17	3	30	24	6	5	0	5	12	4	1	3	30
Bay	13	52	138	104	2	5	9	0	323	6	42	37	104	138	2	323	282	41	1	4	64	152	66	25	11	323
Bradford	12	19	63	31	0	1	6	2	134	3	16	24	40	54	0	134	127	7	4	3	38	46	28	10	5	134
Brevard	7	10	66	20	1	7	7	2	120	0	0	15	44	61	0	120	99	21	2	5	20	48	28	13	4	120
Broward	22	30	206	65	1	13	9	3	349	7	18	25	158	135	13	349	280	69	7	4	62	149	89	27	11	349
Calhoun	0	2	2	0	0	0	2	0	6	0	2	2	0	2	0	6	5	1	0	2	0	2	2	0	0	6
Charlotte	0	0	3	1	0	1	0	0	5	0	1	2	1	1	0	5	5	0	0	0	1	2	0	2	0	5
Citrus	0	0	9	4	0	1	2	0	16	0	1	6	3	6	0	16	14	2	0	0	2	7	3	3	1	16
Clay	6	5	16	11	0	1	0	1	40	0	3	5	11	21	0	40	33	7	5	0	9	12	7	4	3	40
Collier	0	1	8	8	0	0	0	1	18	0	1	0	7	10	0	18	10	8	0	0	1	4	6	5	2	18
Columbia	4	15	27	6	0	1	1	10	64	3	2	3	28	28	3	64	54	10	2	0	19	27	8	2	6	64
Dade	125	113	655	627	49	35	46	74	1724	5	238	172	579	718	17	1724	1273	451	30	20	201	660	421	258	134	1724
DeSoto	2	0	14	25	0	1	1	0	43	5	2	5	14	17	5	43	18	25	2	1	5	13	13	7	2	43
Dixie	2	7	9	4	0	3	2	0	27	1	4	5	4	14	0	27	26	1	0	1	3	13	8	1	1	27
Duval	149	232	770	759	6	97	60	397	2470	44	343	311	773	1019	24	2470	1978	492	142	31	366	901	593	276	161	2470
Escambia	72	96	243	163	15	24	21	7	641	11	84	83	174	293	7	641	552	89	17	13	137	267	124	59	24	641
Flagler	7	4	93	39	1	9	19	1	173	0	7	4	83	70	9	173	169	4	4	16	24	38	43	18	30	173
Franklin	43	13	22	5	0	0	2	0	85	1	15	4	42	15	9	85	74	11	1	0	17	51	14	1	1	85
Gadsden	44	51	215	20	3	0	14	1	348	7	5	10	129	203	1	348	333	15	2	17	105	146	60	18	0	348
Gilchrist	0	0	3	1	0	0	0	0	4	0	0	1	0	3	0	4	4	0	0	0	2	1	0	1	0	4
Glades	1	1	20	6	0	1	0	0	29	0	0	2	22	5	0	29	29	0	0	0	1	18	8	1	1	29
Gulf	2	10	20	9	1	0	3	1	46	2	2	5	11	28	0	46	46	0	0	3	11	22	6	4	0	46
Hamilton	0	3	11	0	0	0	0	0	14	1	0	0	8	6	0	14	12	2	1	0	4	7	2	0	0	14
Hardee	0	2	8	1	0	3	1	1	16	0	4	7	3	2	0	16	9	7	0	1	3	4	5	2	1	16
Hendry	3	1	204	8	0	20	3	1	240	1	3	1	207	29	0	240	240	0	1	2	14	147	62	11	3	240
Hernando	0	0	2	1	0	0	0	0	3	0	2	0	1	0	0	3	2	1	0	0	0	2	1	0	0	3
Highlands	27	10	58	8	0	4	0	0	107	5	15	13	36	43	0	107	81	26	1	0	18	45	32	7	4	107
Hillsborough	180	83	393	379	6	66	43	55	1205	29	206	164	415	401	19	1205	1067	138	19	11	163	496	291	153	72	1205
Holmes	3	0	13	10	0	2	0	2	30	0	15	6	4	5	0	30	30	0	0	1	2	7	12	5	3	30

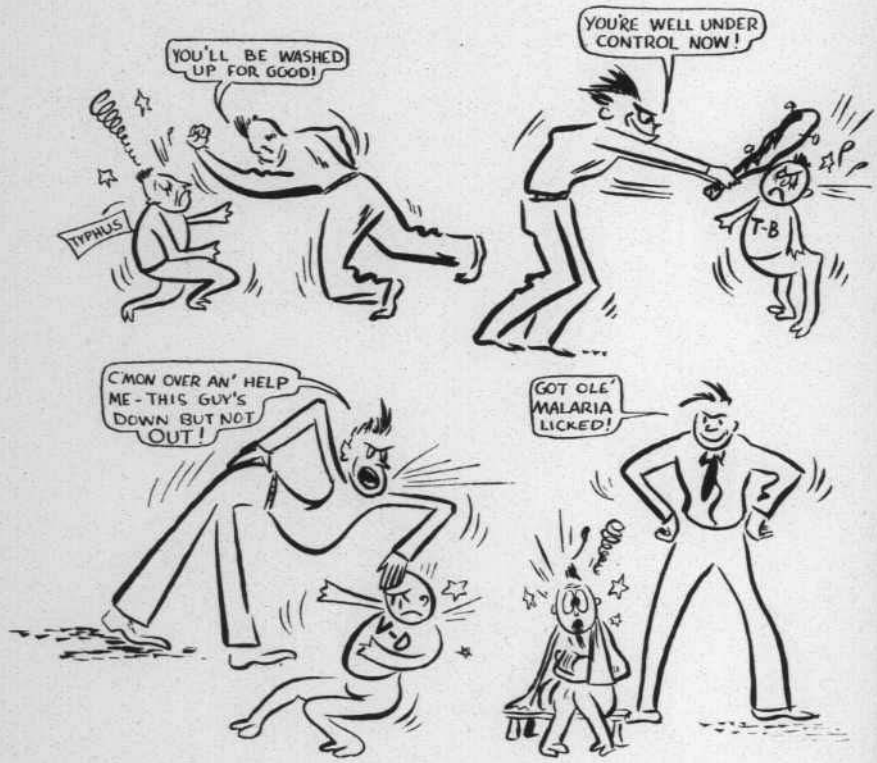
Indian River	2	6	109	14	5	7	7	3	153	1	3	4	75	69	2	153	128	25	9	5	16	51	49	16	7	153
Jackson	2	9	25	10	0	0	4	0	50	4	6	8	15	21	0	50	48	2	2	5	13	13	10	6	1	50
Jefferson	2	13	54	4	0	2	4	0	79	2	2	3	29	45	0	79	74	5	1	3	24	36	9	5	1	79
Lafayette	0	0	1	1	0	0	0	0	2	0	1	0	0	1	0	2	1	1	0	0	0	0	1	1	0	2
Lake	19	9	62	58	2	17	8	24	199	4	11	25	76	80	7	199	141	58	22	3	38	56	51	15	14	199
Lee	6	13	46	21	0	3	9	3	101	2	7	11	28	53	2	101	91	10	2	6	25	34	19	11	4	101
Leon	51	43	141	44	1	13	6	10	309	6	26	22	98	161	2	309	284	25	12	2	72	158	37	19	9	309
Levy	5	13	35	10	0	1	1	0	65	0	3	2	24	36	0	65	56	9	0	0	11	29	15	7	3	65
Liberty	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1
Madison	4	2	73	8	2	2	16	11	118	7	4	1	30	82	1	118	118	0	3	5	34	36	31	6	3	118
Manatee	16	14	97	39	0	11	4	3	184	1	15	18	84	66	1	184	157	27	2	4	20	77	45	25	11	184
Marion	10	24	138	59	0	2	7	2	242	3	10	11	98	122	1	242	221	21	22	2	63	85	42	19	9	242
Martin	5	5	42	13	1	8	2	7	83	0	3	2	44	28	6	83	81	2	1	0	4	35	24	13	6	83
Monroe	12	6	57	30	1	4	3	4	117	3	18	15	32	51	1	117	116	1	1	0	14	57	29	12	4	117
Nassau	12	5	15	44	2	3	4	5	90	8	2	9	31	48	0	90	36	54	10	1	20	18	18	14	9	90
Okaloosa	10	12	15	1	0	0	0	4	42	0	9	4	15	14	0	42	41	1	0	0	9	26	6	0	1	42
Okeechobee	0	0	8	8	0	2	0	0	18	0	2	0	7	9	0	18	18	0	0	1	0	4	6	5	2	18
Orange	30	59	371	176	7	29	34	75	781	15	47	58	310	333	33	781	586	195	20	14	102	338	198	76	33	781
Osceola	1	0	7	5	0	0	0	3	16	0	2	4	5	4	1	16	11	5	2	0	1	7	1	4	1	16
Palm Beach	49	64	1147	691	2	59	32	25	2069	2	53	39	1303	668	6	2069	1942	127	14	9	230	997	566	203	50	2069
Pasco	0	3	8	12	0	2	0	6	31	3	12	4	5	8	2	31	7	24	0	0	1	9	11	5	5	31
Pinellas	11	21	100	105	1	11	12	7	268	17	31	29	71	137	0	268	181	87	2	3	39	96	69	33	26	268
Polk	28	48	308	131	0	13	11	13	552	7	60	49	175	229	39	552	248	304	84	8	67	188	126	53	26	552
Putnam	8	13	83	72	2	2	11	2	193	5	39	30	52	69	3	193	109	84	2	5	44	52	51	23	16	193
St. Johns	2	5	136	47	2	13	17	0	222	3	8	8	126	77	3	222	212	10	0	5	43	91	51	21	11	222
St. Lucie	3	6	96	36	1	11	3	4	160	3	0	1	79	63	17	160	156	4	10	2	22	69	42	10	5	160
Santa Rosa	2	3	4	2	0	0	1	1	13	1	1	6	2	4	0	13	10	3	1	0	6	5	1	0	0	13
Sarasota	2	9	46	19	0	8	3	4	91	1	7	7	45	31	1	91	76	15	1	3	9	38	22	9	9	91
Seminole	11	19	99	15	3	9	5	385	546	2	12	16	184	261	73	546	504	42	258	3	38	113	91	34	9	546
Sumter	1	3	36	40	0	7	4	2	93	0	7	9	31	44	2	93	45	48	1	0	9	34	29	11	9	93
Suwannee	4	3	17	3	2	4	0	1	34	2	5	2	10	17	0	34	32	2	2	0	4	10	11	5	2	34
Taylor	2	3	4	1	0	0	0	16	26	0	5	1	5	13	2	26	25	1	7	1	5	7	3	3	0	26
Union	1	3	9	0	0	0	2	0	15	1	4	1	1	9	0	15	13	2	0	1	2	10	2	0	0	15
Volusia	25	33	134	114	0	8	10	26	350	2	35	48	104	156	7	350	313	37	24	5	53	120	66	47	35	350
Wakulla	2	1	5	1	0	0	2	4	15	2	1	1	5	8	0	15	13	2	1	0	7	4	2	0	1	15
Walton	6	7	21	7	0	1	2	11	55	1	17	6	9	23	0	55	54	1	18	1	11	17	8	0	0	55
Washington	4	9	11	11	1	1	4	1	42	0	6	6	13	17	0	42	39	3	0	2	11	18	5	4	2	42
State Hospital	0	2	16	43	2	90	2	0	155	1	8	5	52	24	66	155	155	0	9	0	1	24	33	43	45	155
State Prison	0	0	0	144	0	0	0	0	144	0	21	3	107	9	4	144	144	0	141	0	0	0	2	0	1	144
Camp Blanding	106	4	27	0	0	6	0	0	143	0	93	0	50	0	0	143	143	0	1	0	12	108	21	1	0	143
Naval Air Station	53	1	4	1	0	0	0	3	62	0	40	1	21	0	0	62	62	0	3	0	13	42	3	1	0	62
Out of State	11	16	28	12	3	10	0	16	96	4	34	18	35	9	0	96	78	18	4	0	11	40	23	7	11	96
Florida - Total	1254	1306	7108	4417	131	675	489	1262	16642	248	1714	1421	6527	6584	396	16642	13947	2695	949	237	2462	6578	3825	1707	884	16642

(*Includes unknown source of reference.)

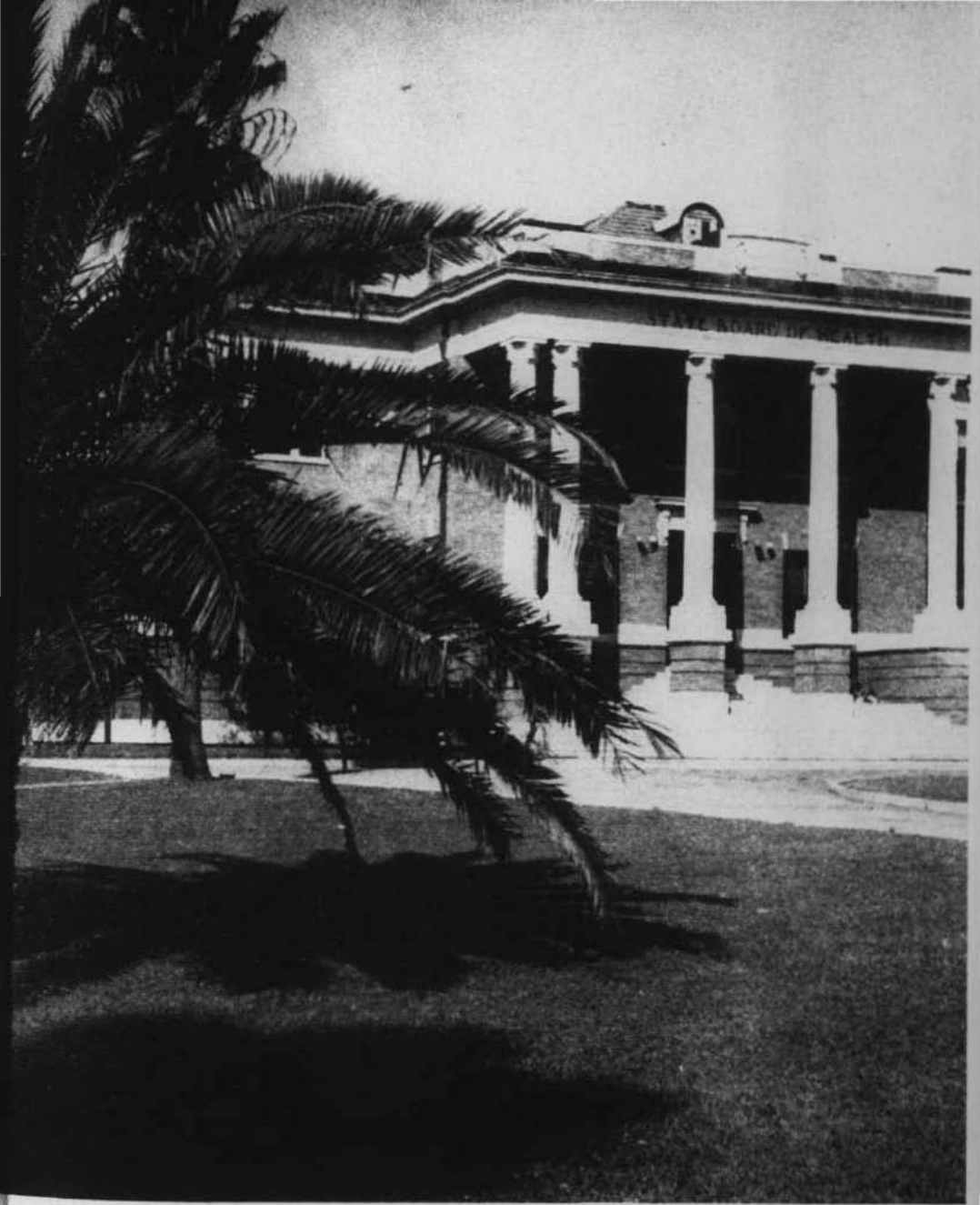
COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Alachua	Gainesville, Florida	Frank M. Hall, M.D.
Bay	Panama City, Florida	Thos. G. Faison, M.D.
Broward	Ft. Lauderdale, Florida	Wm. C. Hatchett, M.D.
Dade	Miami, Florida (Court House)	T. E. Cato, M.D.
Duval	Jacksonville, Florida	L. L. Parks, M.D.
Hillsborough	Tampa Florida	Frank V. Chappell, M.D.
Jefferson	Monticello, Florida	F. A. Brink, M.D.
Leon	Tallahassee, Florida	Paul J. Coughlin, M.D.
Levy	Bronson, Florida	(Temporarily vacant)
Monroe	Key West, Florida	James B. Parramore, MD
Orange	Orlando, Florida	Leland H. Dame, M.D.
Pinellas	St. Petersburg, Florida	R. D. Hollowell, M.D.
Polk	Bartow, Florida	Lawrence M. Zell, M.D.
Seminole	Sanford, Florida	Frank L. Quillman, M.D.
Volusia	DeLand, Florida	R. D. Higgins, M.D.
Baker Nassau	MacClenny, Florida Fernandina, Florida	John W. McClane, M.D.
Bradford Clay Union County	Starke, Florida Green Cove Springs, Florida (Attached to Bradford)	Aubrey Covington, M.D.
Escambia Santa Rosa	Pensacola, Florida Milton, Florida	T. W. Reed, M.D.
Gadsden Liberty	Quincy, Florida (Attached to Gadsden)	(Temporarily vacant)

COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Jackson, Washington, Calhoun	Marianna, Florida; Chipley, Florida; (Attached to Jackson)	C. A. Adams, Jr., M.D.
Lake, Sumter	Tavares, Florida; Bushnell, Florida	R. J. Dalton, M.D.
Madison, Taylor	Madison, Florida; Perry, Florida	C. A. O'Quinn, M.D.
Franklin, Gulf, Wakulla	Apalachicola, Florida; Port St. Joe, Florida; Crawfordville, Florida	Terry Bird, M.D.
Holmes, Walton, Okaloosa	Bonifay, Florida; DeFuniak Springs, Florida; Crestview, Florida	(Temporarily vacant)
Highlands, Glades, Okeechobee	Sebring, Florida; Moore Haven, Florida; (Attached to Highlands)	James H. Wells, M.D.
Suwannee, Dixie, LaFayette	Live Oak, Florida; (Attached to Suwannee); (Attached to Suwannee)	(Temporarily vacant); (Temporarily vacant); (Temporarily vacant)
Northern **District** Hamilton, Columbia, Gilchrist	Lake City, Florida	Robert F. Sayre, M.D.
Central **District** St. Johns, Flagler, Putnam, Marion, Citrus, Hernando, Pasco	Ocala, Florida	(Temporarily vacant)
Southeastern **District** Brevard, Osceola, Indian River, St. Lucie, Martin, Palm Beach	Vero Beach, Florida	S. J. Williams, M.D.
Southwestern **District** Manatee, Hardee, Sarasota, DeSoto, Charlotte, Lee, Hendry, Collier.	Arcadia, Florida	(Temporarily vacant)

Note: Entire state covered.



Sate Board of Health authorities declare that with the cessation of war, the shift in responsibility from military to civilian agencies, including private physicians, and the advent of penicillin intensive therapy, one can foresee danger ahead in the control of VD unless "we as physicians are prepared to cope with the problem on accepted public health practices and sound therapeutic principals. Civilian agencies and private physicians must accept the responsibility of the men discharged from the armed services by providing substitute veneral disease procedures of at least comparable intensiveness. Failure to do so will almost surely result in increased civilian rates. During the war, great gains have been made. These gains must be extended—not lost."



Florida HEALTH NOTES

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JACKSONVILLE • MARCH, 1946 • VOL. 38 • No. 3

"The Need for New Local Health Department Buildings"

The State Board of Health

Hon. Millard F. Caldwell
Governor of Florida

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County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Broward	Ft. Lauderdale
Clay	Green Cove Springs
Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Monticello
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Pinellas	Clearwater
Polk	Bartow
Santa Rosa	Milton
Seminole	Sanford
Sumter	Bushnell
Suwannee	Live Oak
Taylor	Perry
Volusia	DeLand
Wakulla	Crawfordville
Walton	DeFuniak
Washington	Chipley

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D. H. Turner, D.D.S.

Bureau of Vital Statistics
Edward M. L'Engle, M.D.

Bureau of Preventable Diseases
R. F. Sondag, M.D.

Div. of Venereal Disease Control

Bureau of Malaria Control
John A. Mulrennan

Malaria Research
Mark F. Boyd, M.D.
Rockefeller Foundation
Tallahassee

Bureau of Maternal & Child Health
Lucile J. Marsh, M.D.

Florida HEALTH NOTES

ESTABLISHED 1890

Says Dr. Reginald Atwater, secretary, American Public Health Association, appearing before the Senate Committee on Bill No. S 191:

"It may be stated conservatively that less than 10 percent of the health departments (of the country) are provided with physical facilities even approaching reasonable standards of adequacy. Some of the remaining health departments occupy cramped quarters in basements or attics of county courthouses and city halls. Others are more generously provided for in abandoned school buildings or in converted dwellings."

He urged that every community have at least one small health center for public health purposes. The Surgeon General, however, on the basis of one health center for each county estimated the need at 2,714. The bill as reported would provide aid for construction on the basis of one health center for each 30,000 population.

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FLORIDA'S NEED FOR MORE ADEQUATE LOCAL HEALTH DEPARTMENT BUILDINGS AND EQUIPMENT

A THUMBNAIL SKETCH OF A "SUFFICIENT" HEALTH CENTER BUILDING

A health department should be the cleanest, most inviting place in a village, town or city. In the public's mind it should be synonymous with proper living conditions: a building sufficiently large, well lighted, clean and adequately maintained. It should be symbolic of good health which it is supposed to promote. It should be the first place which proud residents point out to attentive visitors. Such a health department reflects the interest of citizens and the progressive attitude of the city-county authorities of a community.

LOCAL COMMUNITIES FACE URGENT JOB OF CORRECTING "UNHAPPY PHYSICAL CONDITIONS" OF THEIR RESPECTVE HEALTH UNIT BUILDINGS

The foregoing is not a dream picture. Nor does it represent the health centers of Florida. For the number of adequate-sized, properly maintained health unit buildings can just about be counted on one hand. Most often, the local health departments are on the second floor of old delapidated buildings, the last rooms down long dark halls. They are found in basements, and in buildings which have been abandoned or condemned for the use of other county departments. Sections of old court houses, long ago unfit to house the County Fathers have been handed over to the health departments. School houses, on the eve of collapse, have been donated to the need of the health unit. Entrances are too often unsightly and dirty. Halls are inadequately lighted, although this is a point in favor sometimes, for it probably hides stained ugly walls.

Nor is there very much to guide the visitor to the sections to which the department has been shunted. The names of other agencies, if there be any in the building, are in prominent places, even to the use of flying flags, but not so the health department. Folks seeking it are apparently expected to be inbued with the "scent" of a good hound dog. Does the health officer believe "everybody who needs it can find it", or is he hesitant to draw attention to the shoddy appearance of the department?

Fortunately, however, such entrances are not ALWAYS the case. But a presentable entrance is often off-set inside by the crowded quarters, rickety chairs, plank benches and second-hand furnishings.

If the foregoing be harsh and "unpatriotic", we hasten to point out that it is also true. Therefore, the purpose of devoting this issue of HEALTH NOTES to the subject of health unit buildings is with the hope that these indictments will arouse enough indignation and touch the pride of the good populace sufficiently that it will bestir itself enough to look into the housing and equipment of its local health department.

Let it be said that EVERYTHING is not wrong with ALL of Florida's local health units. Yet there are so few of an adequate nature. The former is more of the truth than not, and when it is, is sickeningly discouraging. There are so many which are so desperately lacking in space, which have dirty, unappetizing entrances, are housed in dark, ugly buildings, that one would be hard put to give a "passable" rating to at least 25 out of the 37 existing health units over the State.

Now there are a number of conditions which may be pointed to as the "cause". For instance, public health is one of the newest of county responsibilities. If the county has any space at all, it is usually that which other departments have already turned down. Also, it being the "baby", some county officials, when assuming the responsibility of the unit have not quite appreciated its far-reaching functions—its potentialities to the community. Thus, the health department takes the crumbs, and unless an intensified promotional campaign is carried on by the local health officer and his local health committee, the "status" is likely to continue "quo."

So the big question comes: What is needed to correct the present questionable housing status of health units in Florida: Usually, the answer is "money". And at this writing there is a dim light upon the horizon which indicates that financial help is in the "pending" state, and may well be available to counties in the not-too-distant future. Yet "money" is not the whole need or cause; there are other even more basic reasons for the poor housing of health departments.

Time was when a local health department's activities were pretty much limited to garbage inspection, correction of nuisances, enforcement of quarantine and other activities handed down from the early days of public health organization.

But that is not the picture today. For example, one of the biggest jobs of a local health unit lies in informing the

constituents about the services it is in line to render, as well as exactly what the citizens are in position to demand. It is true that public health control was once thought of in rather a limited scope, yet anything but that is the situation today.

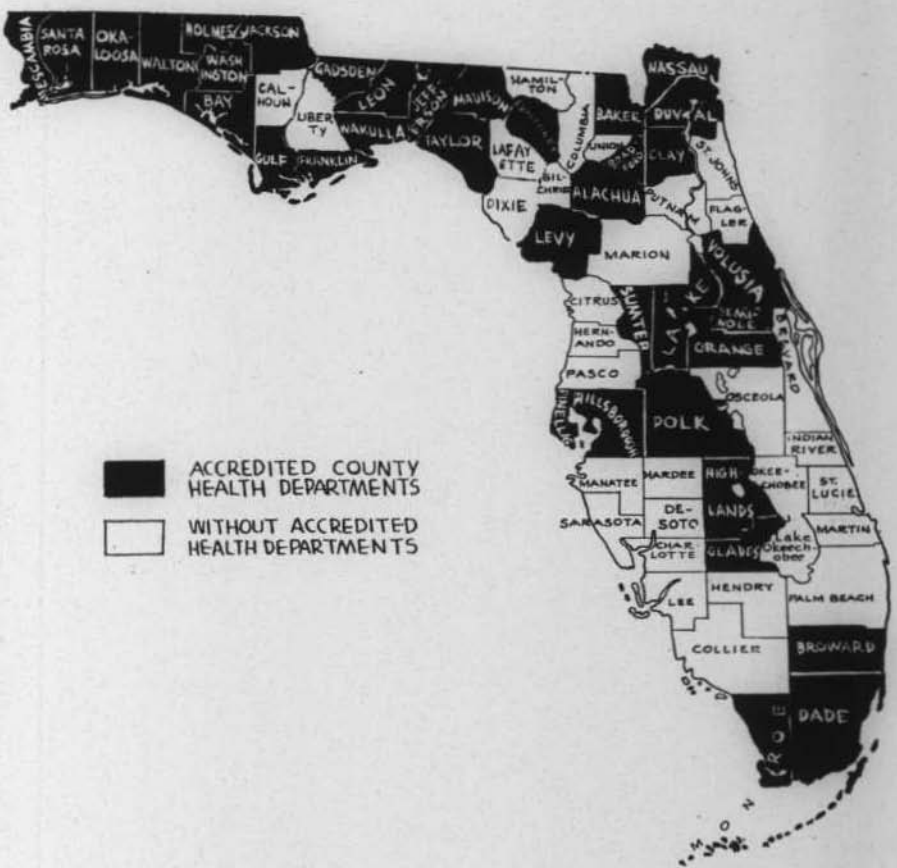
A health department is concerned with the overall health problems of the community. What's more the local departments of Florida are making a valiant stab toward doing something about those problems. For the past four years, however, most health units, just as other county agencies or business firms have been all but stymied by lack of personnel, be it trained or of the ordinary garden variety. The Call to Arms took care of that. But thankfully, this condition is past and gone. Health departments today face a new era, and it is the most promising era since public health control became an acknowledged need in Florida in the early '80's.

And just what is public health control? Just what are the functions of a local health department? Those activities cover the operation of clinics (VD, immunization, well baby check-ups, dental care, nutrition and a mile-long list of other preventive measures), giving protection with regard to water, milk, food, maintaining nursing service, promoting health information through adult channels, and health education in furnishing technical information for the advancement of schools. Because of this far-reaching service, there is a legitimate right for the health department to expect consideration from the community in the way of housing and equipment—most of which channel through the County Commissioners' office.

And there is still another important factor why every community should have a reputable appearing and functional health unit building. A health department may be making a desperate stab at providing up-to-date services, but if it is disgracefully housed and poorly equipt, if it has a dirty entrance, is in a falling-down building or a drafty auditorium as one of Florida's units is, then it is not only hindered in the performance of its work but it fails to command the respect of the community. ONE BEGETS THE OTHER.

The foregoing then, when **not** gathered into a symmetrical and functional pattern—when individuals fail in their promotion and support—may well prevent or thwart the progress of getting a health center built and paid for. Obviously it rests upon the community—and its understanding of and interest in what its health department is doing or trying to do to protect said community's health—whether there shall be a health center to be proud of or one which calls forth apologies.

ACCREDITED COUNTY HEALTH DEPARTMENTS OF FLORIDA



Directors Tell Story of *Not Enough Room*

Most graphic word pictures of needs and handicaps under which local health officers are working have come from them, and we give you the following excerpts from a representative group. It is apparent that there is an obvious need for actual buildings or remodelling of some sort in virtually every county, although lack of space has prevented our listing only the most urgent ones. In some cases the main health unit buildings have been deemed "passable" but a loud cry is heard for small buildings in towns other than the County Seat.

In this tiny cubicle which is used for prenatal, VD and every other sort of consulting room the walls extend only a couple of feet above the nurse's head (note arrow). No privacy is possible in treatments or consultations, a feature which is an almost "must" in any health center, whether it be in Madison or Timbuctoo. (*Photo by rsa*)

Health Buildings Listed in Three "*Condition*" Groups

The condition of Florida's local health unit buildings can be divided into three classes. Included in the first are the six newest and most adequate in size:

Bay County, Panama City
Bradford County, Starke
Lake County, Tavares
Leon County, Tallahassee
Monroe County, Key West
Pinellas County, Clearwater

At the Madison County Health Unit where there "is just room enough to milk eight cows" we give a glimpse of the tiny toilet which has to serve white, colored, diseased and well, male and female. The enclosure is of thin plywood.
(Photo by FSA)

The second group includes units in most cases obviously built for anything but for which they are being utilized. Also, along with being illy-arranged, they are usually too small for their present, fast-expanding personnel and activities. They run the gamut from court house basements to old residences—from space over stores to abandoned buildings which have been cleaned up, painted and generally rehabilitated by member of the staff.

The third group is the scrapings of the barrel and include such as:

Broward County, Ft. Lauderdale; Clay County, Green Cove Springs; Jackson County, Marianna

Prize description comes from Madison County, and here it is only fair to say that although the activities of this unit are being carried on in room "just large enough in which to milk eight cows," that it is one of the neatest and attractively kept of any health department in the State, bar size and condition. It is also one of the busiest—its staff being outstanding in its efforts to publicize the program and explain to the citizens what they can expect from their County Health Department.

"Consider for a moment, the overall size and arrangement of the present home of our department. The entire floor space is only 28'x 36', or 1008 sq. ft., or just enough room in which to milk eight cows. Certainly not enough room for eight people to carry on the diversified program required in a good public health program. This space is divided into four tiny rooms, one hall and a toilet space.

Here is another crowded corner of the Madison County Health Unit. There are no closets or shelves in the room which is used for a dozen different purposes and materials have to be shunted "under or behind." Sanitarian O'Quinn looks on as the VD follow-up worker finishes checking her records. He will immediately grab the table for another use—perhaps in connection with pure milk or food. *(Photo by rsa)*

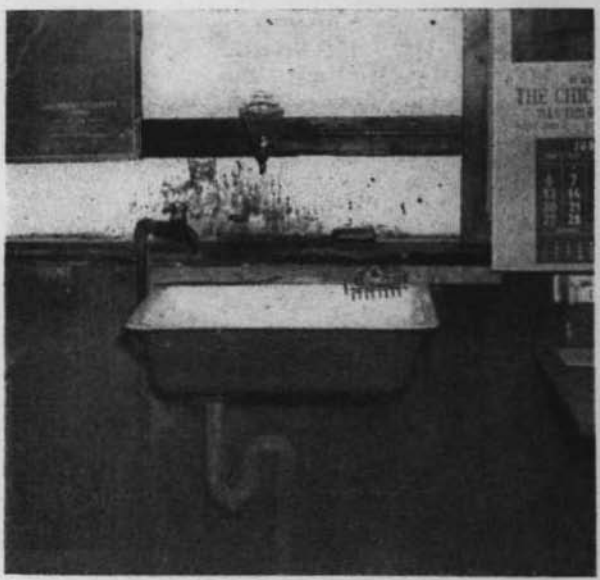
The front or main room is 11'x 8', which is used as a reception room, the clerks and stenographers room, record room and general information booth. "Booth" is about right for there

is no room for seats for visitors or patrons; the clerks' chairs and desks are used for that purpose. There are no windows in this room, but we have outside ventilation by leaving the front door open when it is not too cold.

To the right of this room we have a rather large room (11'x12'), that holds two desks, two filing cabinets, two shelves, one storage closet and a non-circulating wood heater. This room is used by three nurses, one file clerk, a clinic aide, and the sanitary officer, except when it is in use as a "hip-shot" clinic. There is one window in the room.

"The hall serves as a laboratory, lavatory, storage room, colored clinic aid quarters, printing office, with sufficient space cut off by means of a thin beaverboard to house the one and only toilet for white, colored, male, female, diseased and well, not to mention the part it plays as a specimen collection station.

"Just off this hall we have a room 8'x16' which we laughingly call a clinic room. All VD examinations, immunizations, and other clinics are held here. It also serves as an interviewing room although the walls are also of beaverboard and extend only half way to the ceiling. The two windows in this room cannot be opened as the adjoining room belongs to a local physician. We can hear his patients yell but in turn he probably has to listen to



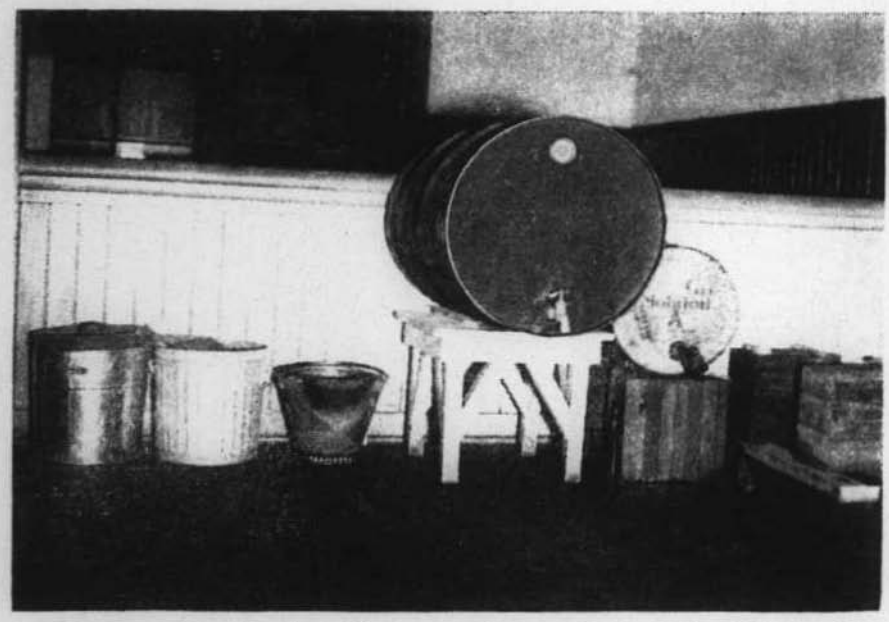
At the Jackson County Health Department, Marianna, the Center is quartered in a dark, illy-kept, in bad repair, discarded school building. Most of the treatment and consultation rooms are in the old auditorium. The partitions are of curtains and thin beaverboard, forming little rooms. There is certainly no lack of space at this unit, but the condition of the building is deplorable. Here is the sink the personnel use. This picture is representative of the entire set-up. *(Photo by rsa)*

our "VD tales of woe." And so it goes. The needs of Madison County can be summed up in one paragraph.

"We need a new building where people can be made more at home and where their private business can be discussed as such. Where we have elbow room to do our work. Where what we preach may be practiced, i.e., toilets, lighting, ventilation, heat, and sufficient room."

In Broward County, which is listed in the "dregs" group, the health unit is in an old concrete block building, on the verge of collapse. "The space is adequate, but badly arranged. Building was constructed prior to 1926 and is deteriorated and antiquated. Toilet facilities inadequate and in bad repair. Walls of building are of plaster, which has fallen in a number of places. The floors are of pine, and are giving away in inopportune sections. The roof is caving in, in places, too.

Along with a new building the Broward County Health Department lists as MUSTS a flouroscope machine, a small laboratory to be used for examination of specimens, in



This picture shows the first sight to reach the patient's eye as he climbs the dingy stairs to enter the Jackson County Health Department located in an old school building. The entire unit is anything but what a representative health department should be in the way of appearance and basic cleanliness. (*Photo by rsa*)

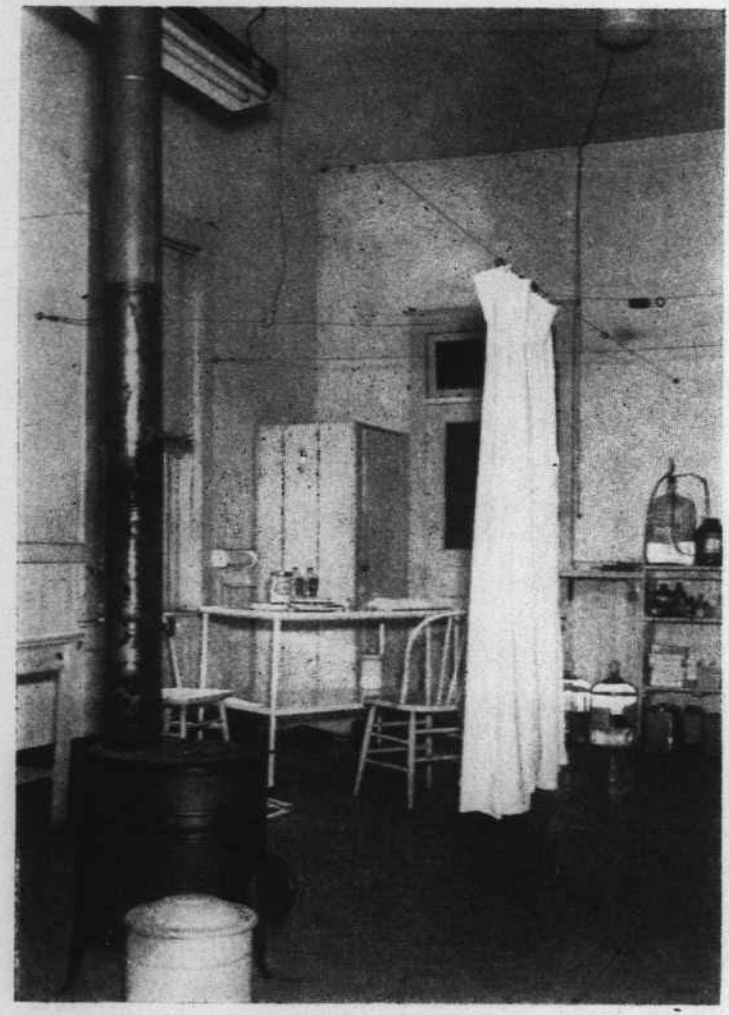
connection with maternal clinics, a steralizer, desks, chairs and library equipment are necessary. The furniture, like the building, is in a bad state or repair.

Escambia County reports a condition like this: "When this building was built 31 years ago, the population of Pensacola was about 30,000. The population of the city proper to-

The Jackson County Health Department uses most of the large auditorium of an old school building at Marianna. Here is a view of the stage where general "tear-up" work is going on. Clinic rooms are divided by beaverboard and curtains which extend slightly above one's head. There is no privacy nor protection from the noise and dust and dirt of the stage repairs. (*Photo by rsa*)

day is double that figure. Greater Pensacola, including outlying communities, is around 100,000.

"During clinic hours, several days a week, it is almost impossible to get around inside the building, both upstairs and downstairs, because of the large crowds. More clinic rooms



At the Clay County Health Department which is housed upstairs over stores and restaurants, the stairs and hall are dark and usually dirty. Once inside there is plenty light from large widows, but there are no partitions in this unit either, except for curtains, which draw on wires, as shown in the above picture. The unit is heated by wood stoves. *(Photo by rsa)*

are needed, more offices, and a waiting room for both white and colored is necessary. Also, more toilets and lavatories should be installed. In short, the capacity and facilities of the building should be about doubled."

Seminole County reports need of a central health unit building with adequate parking space, waiting rooms, examining and treatment rooms, as well as "elbow" room for the clerks, nurses and sanitarians.

Small, new buildings are needed in Altamonte Springs, Ovieda and Geneva. Present clinic at Ovieda is a store building with no partitions. Facilities are little better at Altamonts, where the clinic is held in a grocery store. No clinic is held in Geneve at all because of unavailable space.

Alachua County is two jumps ahead and has been authorized by the Advisory Committee to secure a lot for the construction of a new building. Architects have already submitted plans. Total approximate footage will be about 528 sq. ft. with an estimate cost of $125,000, plus equipment, of course.

Proposed building is to be a two story type with the second floor housing auditorium, library, four student rooms and staff room. This to house the facilities of the new Training Center. Auditorium will seat approximately 200 and will be used for meetings both lay and professional of the Health Department and other interested agencies. First floor will contain the operating unit for the personnel."

A view of the upstair entrance to the Clay County Health Department at Green Cove Springs. The two signs heralding the unit's location are the only signs to be found. Note the pine benches outside and inside. The hall is dark and usually looks more like a store room than a public thoroughfare.

(Photo by rsa)

In Lake County where one of the newest health buildings is located in Tavares, there is another metropolis, Leesburg, where the health center is "woefully inadequate and located one mile from center of city on the edge of 'colored town'. It occupies the front of an old garage, and both exterior and interior are most unattractive. The only lavatory once available is now inaccessible because it has to be reached through the dining room of a family who moved into the rear of the building. City pays the rent. In the building's location, we serve practically no white clientele whatsoever".

In Sumter County the central health unit is in Bushnell. The Health Officer says "This unit has been housed in an old bank building since its inception, which is not bad, being bright, airy and of sufficient space. However, it has the typical bank arrangement, without any breakdown into rooms . . . Female GC smears are taken in a small, unventilated room at the head of stairs. Male smears and genital exams are done in the small lavatory" . . . and so it goes. "A new building of modest proportions, one story, on county owned land, according to an accepted health unit plan, would be the permanent solution to our present uncertain status."

And here is the street entrance to the Clay County Health Department. Note the dirty entrance, and especially that there is nothing to direct the patient or visitor to the rooms above. When a filling station attendant working two blocks away was asked where the department was located he said: "I'm sorry I don't know. I've only lived here four years." *(Photo by rsa)*

Then there is Wildwood, the county metropolis of Sumter whose "facilities are the worst. No suitable building there for rent, so our colored clinics; for which there is a great demand, are held in the front of the auditorium of the colored school . . . just

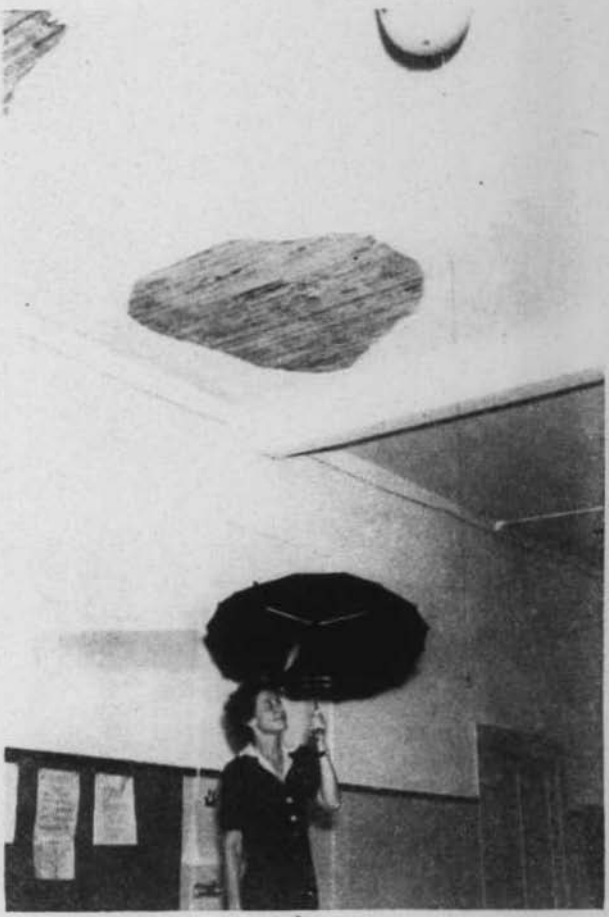
below the stage foot lights, where everything is said and done, except the giving of hip shots behind a stage curtain. No whites come to this set-up, so there is no white clinic."

"Webster, 10 miles south of the county seat is of such population that it needs and deserves a clinic building, as proposed for Wildwood. No clinic held there at present because of no available space."

From Hillsborough County comes an estimated need which is virtually impossible to break down. Suffice it to say that although there is a reasonable sized health unit building in Tampa proper, it is anything but large enough, or well enough planned to take care of the huge public health program now being carried on there.

However, there is Plant City, a town of about 10,000 plus a large rural population for which "our office and clinic space is woefully inadequate and most inconveniently situated and arranged."

An estimated $60,000 should cover the building needs of Hillsborough County.



In Ft. Lauderdale at the Broward County Health Department the roof leaks, the plaster on very high ceilings is falling—the floor is giving way and the place comes nearer to presenting a menace to its visitors than a haven. Building is an old county establishment which has long since been "turned over to the health department." Here, one of the pretty nurses jokingly holds an umbrella over her head as she stands under the threatening plaster. The plaster which gave way two days before and left the yawning hole in the ceiling barely missed the young lady's head as it crashed to the floor.

(Photo by [illegible])

Janitor service is supposed to be furnished at the Broward County Health Department, but here we show the men's toilet which didn't look as though it had been swept in a "month of Sundays." This is one case where a picture should be worth a thousand words. (Photo by RSA)

Duval County reports that "It is practically impossible to present a pleasing appearance to visitors because of unsuitable offices. Although the Health Officer is "new" on the job he already has plans outlined for a new building, is looking hopefully to his county commissioners.

Pinellas County reports a desparate need for a building in St. Petersburg. "At present our space consists of only three rooms in the Vocational School Buildings. In these three rooms the office details of five nurses, two sanitarians, two clerks and the health officer are carried on, which makes for confusion and congestion. . . "

Polk County says in a crisp statement "Polk County with a population of over 112,000 sq. miles and 14 incorporated municipatilities, is sorely in need of public health facilities, buildings and equipment.

"At present our facilities consist of one small office in Bartow, which is without clinic facilities, and two rooms on the second floor of the City Hall in Lake Wales. The one clinic room at the County Hospital in Bartow is used as the clinic for that Area.

"At least six completely equipped public health centers are necessary before the Health Department can offer public health services to the entire County.

"The estimated cost of the necessary buildings and equipment is about $275,000."

In Orange County where the health unit has been an "orphan" for the past six months, the County Commissioners have recently let a contract to remove the large "court room" of the court house and convert it into ten offices or rooms. "This", according to the Health Officer, "takes care of the Central Office in good shape except the VD Department which is in a rented building six blocks away.

"In the present building one room is being fixed up for a laboratory. One is badly needed as specimens have to be sent to Jacksonville, 150 miles away, or Tampa which is 100 miles distant.

"Even though the central unit is pretty well situated for the next few years, there is a crying need for new buildings at Winter Park, Winter Garden, Apopka and a colored

center in Orlando. The cash outlay would be in the neighborhood of $100,000.

PROPOSED CURE FOR THE ILLS OF FLORIDA'S INSUFFICIENT HEALTH CENTER BUILDINGS—BILL No. S. 191, WHICH HAS ALREADY PASSED THE SENATE AND IS NOW PENDING IN THE HOUSE.

Summary of Basic provisions of Bill No. S. 191.

"In brief summary, S. 191 proposes a program of Federal Grants-in- aid for two purposes:

1. To assist the States to ascertain their hospital and public-health facility needs through State-wide surveys and to develop State-wide programs for construction of those facilities needed to supplement existing facilities so as to serve all the people of the State, and

2. To aid in the construction of those necessary facilities for public and voluntary non-profit hospitals and for PUBLIC HEALTH CENTERS, which State and local resources can help and can maintain, and which are in conformity with the approved State construction program and the standards for construction projects under the bill."

Says the Committee: "We have given careful consideration to the need for hospital facilities as shown by the testimony of a large number of well-informed witnesses from many walks of life. It has been pointed out that our NATIONAL HEALTH rests upon four main pillars—Medical research, PREVENTIVE MEDICINE (PUBLIC HEALTH CONTROL), medical care and hospitalization. This bill is designed to strengthen all four through the provisions of more adequate hospital and health center facilities."

We give a brief resume of the bill and suggest that you write your Senator for a copy for more complete details.

The bill provides that the Federal percentage shall be such that the remaining non-Federal percentage bears the same ratio to 50 percent as the per capita income of the State bears to the national per capita income; the bill fixes a maximum limit of 75 percent and a minimum of 33 1/3 percent of the Federal

percentages to be allowed the States (counties). For instance, Florida must put up 41 percent of the total building cost in order to receive the 59 percent alloted by Federal. Other states run the gamut in variation. Example: Connecticut will be required to raise 66 2/3 percent of its proposed building costs because its per capita income as of 1944 was $1,431 while Mississippi's pro rated income was $468 and will therefore receive the maximum amount which is 75 percent of the total cost. Florida's income per capita as of the same year (1944), was $828. She therefore would be entitled to $1,687,000 annually for five consecutive years should the bill be passed by Congress.

The Committee's most recent report shows the bill proposing a 5-year construction program and authorizes annual appropriations of $75,000,000 for each of the five fiscal years, 1947 to 1951, inclusive, plus unappropriated or unexpended balances.

COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Alachua	Gainesville, Florida	Frank M. Hall, M.D.
Bay	Panama City, Florida	Thos. G. Faison, M.D.
Broward	Ft. Lauderdale, Florida	Wm. C. Hatchett, M.D.
Dade	Miami, Florida (Court House)	T. E. Cato, M.D.
Duval	Jacksonville, Florida	L. L. Parks, M.D.
Hillsborough	Tampa Florida	Frank V. Chappell, M.D.
Jefferson	Monticello, Florida	F. A. Brink, M.D.
Leon	Tallahassee, Florida	Paul J. Coughlin, M.D.
Levy	Bronson, Florida	(Temporarily vacant)
Monroe	Key West, Florida	James B. Parramore, M.D.
Orange	Orlando, Florida	Leland H. Dame, M.D.
Pinellas	St. Petersburg, Florida	R. D. Hollowell, M.D.
Polk	Bartow, Florida	Lawrence M. Zell, M.D.
Seminole	Sanford, Florida	Frank L. Quillman, M.D.
Volusia	DeLand, Florida	R. D. Higgins, M.D.
Baker Nassau	MacClenny, Florida Fernandina, Florida	John W. McClane, M.D.
Bradford Clay Union County	Starke, Florida Green Cove Springs, Florida (Attached to Bradford)	Aubrey Covington, M.D.
Escambia Santa Rosa	Pensacola, Florida Milton, Florida	T. W. Reed, M.D.
Gadsden Liberty	Quincy, Florida (Attached to Gadsden)	(Temporarily vacant)

COUNTY UNIT	HEADQUARTERS	HEALTH OFFICER
Jackson, Washington, Calhoun	Marianna, Florida; Chipley, Florida; (Attached to Jackson)	C. A. Adams, Jr., M.D.
Lake, Sumter	Tavares, Florida; Bushnell, Florida	R. J. Dalton, M.D.
Madison, Taylor	Madison, Florida; Perry, Florida	C. A. O'Quinn, M.D.
Franklin, Gulf, Wakulla	Apalachicola, Florida; Port St. Joe, Florida; Crawfordville, Florida	Terry Bird, M.D.
Holmes, Walton, Okaloosa	Bonifay, Florida; DeFuniak Springs, Florida; Crestview, Florida	(Temporarily vacant)
Highlands, Glades, Okeechobee	Sebring, Florida; Moore Haven, Florida; (Attached to Highlands)	James H. Wells, M.D.
Suwannee	Live Oak, Florida	(Temporarily vacant)
Dixie	(Attached to Suwannee)	(Temporarily vacant)
LaFayette	(Attached to Suwannee)	(Temporarily vacant)
Northern District Hamilton, Columbia, Gilchrist	Lake City, Florida	Robert F. Sayre, M.D.
Central District St. Johns, Flagler, Putnam, Marion, Citrus, Hernando, Pasco	Ocala, Florida	(Temporarily vacant)
Southeastern District Brevard, Osceola, Indian River, St. Lucie, Martin, Palm Beach	Vero Beach, Florida	S. J. Williams, M.D.
Southwestern District Manatee, Hardee, Sarasota, DeSoto, Charlotte, Lee, Hendry, Collier.	Arcadia, Florida	(Temporarily vacant)

Note: Entire state covered.

The above drawing just about sums up the overall story of Florida's public health center buildings. The question is up to the local citizens, "Shall it be this—or this?" (*Cartoon by Brunetti*)

Florida HEALTH NOTES

PUBLISHED BY THE FLORIDA STATE BOARD OF HEALTH

JACKSONVILLE • APRIL, 1946 • VOL. 38 • No. 4

CANCER CONTROL ISSUE

The State Board of Health

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Governor of Florida

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Bureau of Tuberculosis
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ACCREDITED HEALTH UNITS

County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Broward	Ft. Lauderdale
Clay	Green Cove Springs
Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Monticello
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Pinellas	Clearwater
Polk	Bartow
Santa Rosa	Milton
Seminole	Sanford
Sumter	Bushnell
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Rockefeller Foundation
Tallahassee

Bureau of Maternal & Child Health
Lucile J. Marsh, M.D.

Florida HEALTH NOTES

ESTABLISHED 1890

KNOW THE DANGER SIGNALS OF CANCER

. . any sore that does not heal—particularly about the tongue, mouth or lips

. . a painless lump of thickening, especially in the breast, lip or tongue

. . irregular bleeding or discharge from the nipple or any natural body opening

. . progressive change in the color or size of a wart, mole or birthmark

. . persistent indigestion

. . persistent hoarseness, unexplained cough or difficulty in swallowing

. . any change in the normal bowel habits

For further information write to
FLORIDA DIVISION, AMERICAN CANCER SOCIETY
711 Stovall Office Building, Tampa 2, Fla.

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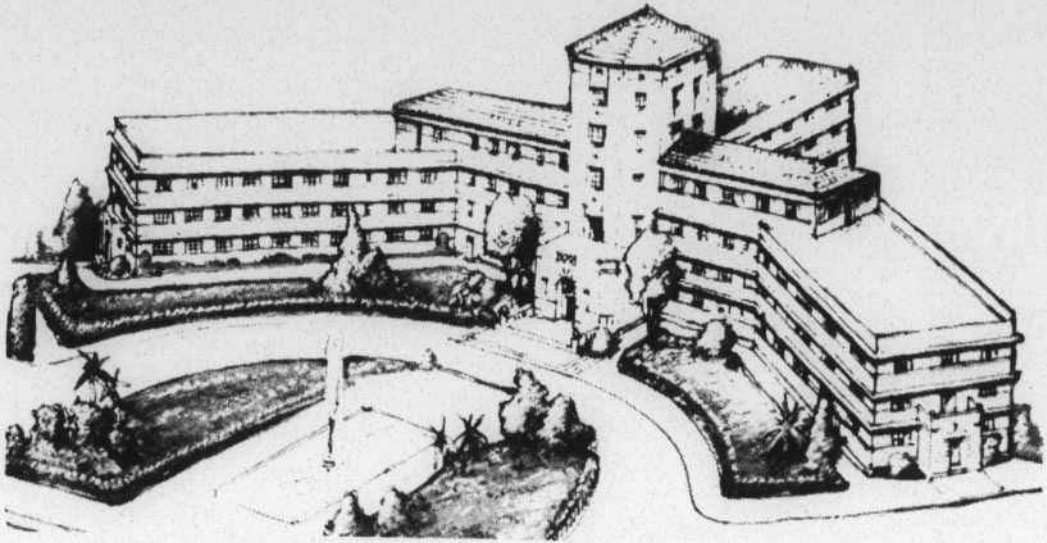

Proposed new hospital for the treatment of and research in cancer control to be erected in Miami

More Progress Made In Past 25 Years of Cancer Fight Than In Preceding 3000 Years, Declares

MRS. MALCOLM SMITH, *State Commander*
Field Army, American Cancer Society

For the first time in history a planned and organized attack is being made on cancer. A more widespread program of lay education than has ever before been attempted is being carried out by the Field Army of the American Cancer Society in an effort to save the lives of from a third to a half of the shockingly large annual death toll of cancer.

This program, we know from experience, is saving lives by making people cancer-conscious and getting them to seek medical treatment as soon as they observe any of the cancer danger signals.

But though it is true that many die needlessly each year because of fear or ignorance . . . perhaps as many as a thousand in Florida each year . . . there are many more who today cannot be saved by medical science.

Mrs. Malcolm Smith, State Commander, Florida Division, American Cancer Society.

Though cancer has been known for centuries, it has continued to baffle medical men. Most of the other great killers have been brought under control. And in the last 25 years more progress in fighting cancer probably has been made than in the preceeding 3,000. But the fundamental question—What is the cause of cancer?—still is unanswered.

The most thoughtful minds in the cancer field are convinced that little

planned by various medical schools, universities and cancer clinics.

The next step was the organization of 20 panels made up of 80 leading experts in the various fields of research which are fundamental to the cancer problem. These panel members make recommendations on what ought to be done in each field and study the reports of what already has been done.

The committee also is working with the Federal Government to obtain all the information and materials of wartime research which can be made available without endangering secrets vital to national security.

In addition to its fact-finding functions, the committee already has made recommendations for the expenditure of the first half million dollars and the American Cancer Society has appropriated that amount for chemistry, physics, biology, and clinical research. The committee also has recommended that at least $50,000 be used for fellowships which will attract able men who are being released from the armed forces and from various wartime research programs. During 1946, with most of the preliminary work out of the way, the program is expected to go farward much more rapidly.

Plans for 1946 call for the expenditure of at least $3,000,000 on research. Whether that is possible depends, of course, on whether campaign goals are met. In Florida, there is every indication that the state goal of $132,720 will be raised. With today's awareness of cancer, we believe that the nation-wide goal of $12,000,000 also will be achieved.

If that amonut is raised, some medical authorities believe it entirely possible that the answer to the problem will be discovered in the next five or ten years. As it is possible to enlist more and more people into the costly research program, the chances of discovering sooner the cause—and, hence, the cure—for the disease are increased.

The year 1946 well may be the turning point in the long battle against the disease which has been termed our Number One Enemy. The American Cancer Society and its branches throughout the nation are redoubling their efforts to make it so.

further progress against the disease in its advanced stages can be made until the cause of cancer can be found. Therein, they believe, lies the real hope for the future.

Cancer research, for the first time, now is being coordinated. For years, of course, doctors and scientists have been trying to find the cause and cure for cancer. But, for the most part, these men have been working as individuals without any true coordination of effort or any really effective way to profit by each other's experience and knowledge.

That has meant that a great deal of time and manpower has been expended in duplication of effort.

If we in this country gained nothing else out of the war just finished, we did learn to work together to solve a complicated scientific problem. In the newspapers recently, we have seen many accounts of how scientists all over the country contributed to the development of the atomic bomb. That is exactly the way we are now attacking the cancer problem. As a matter of fact, the Natoinal Research Council, which coordinated the work on atomic energy, is also directing cancer research.

Last year, for the first time, the American Cancer Society was in a position to appropriate money to assist the cancer research program. Following last April's campaign for funds, one million dollars was set aside to further research. The Society felt that research efforts should be coordinated so that the greatest possible effectiveness would come from the money spent. Accordingly, it entered into a contract with the National Research Council to serve as its research advisor. The Council appointed a committee of 14 of the nation's foremost authorities in the field to recommend the course to be followed.

Dr. Walter J. Matherly, State Campaign Chairman.

Six important steps already have been taken by the committee. First, a survey was made of all cancer research under way in the United States. The survey also found out what research programs were being

CANCER DISPLAY AT REC

AT RECENT STATE FAIR, TAMPA

FLORIDA SURGES AHEAD WITH PLANS FOR CANCER CONTROL

By DR. J. N. MOORE, *Chairman*
State Executive Committee, Florida Division
American Cancer Society

The fact that cancer is not a hopeless disease, that, in fact, it is the most curable of all highly fatal diseases, is the basis of the life-saving work done in Florida and throughout the nation by the Field Army of the American Cancer Society.

Each year in Florida, cancer kills more than 2,000 men, women and children. At least 600 . . . possibly as many as 1,000 of them, die because they do not take advantage of medical science's ability to cure early cancer.

It was to save the lives of at least a third of cancer's grim toll that the Women's Field Army was established ten years ago. Its job was to educate the general public to recognize the danger signals of early cancer and to encourage people to seek competent medical treatment at once if any symptoms appear.

From the outset, the Field Army was pledged to a policy of medical supervision of all its activities. That policy holds true today.

In Florida, physicians and surgeons make up the majority of the executive committee which also includes a representative of the State School system, a finance chairman, a state treasurer, and the State Commander of the Field Army, Mrs. A. Malcolm Smith, Jr., of Tampa, and myself as chairman.

A board of directors consisting of leading medical and lay figures throughout the state also serves in an advisory capacity.

The Field Army adopted as its slogan "Fight Cancer with Knowledge" and embarked upon a program of personal contact with women to tell them of the threat they faced from cancer.

At the outset, the program dealt with types of cancer peculiar to women because more women than men die of types of cancer in their early stages.

One of the State's most prominent physicians in cancer control, Dr. J. N. Moore, State Executive Committee Chairman, conferred with Florida's First Lady, Mrs. Millard F. Caldwell, Honorary State Commander, at the Division's annual meeting in Miami last November. (Photo by Miami Herald).

Field Army commanders and other officers came in contact with the public by organizing and meeting audiences gathered to receive information on cancer control. At many such meetings women who had heard for the first time the signs and symptoms which might mean cancer declared that they had no idea of the seriousness of symptoms which they individually possessed and planned at once to go for a physical examination.

Many of them found that cancer did not exist but some of them discovered that it did and that it was early and, therefore, in all probability, curable. Prompt and proper treatment followed and these women expressed in no uncertain terms their gratitude to the Field Army for probably saving their lives.

Occurrences of this kind naturally resulted in stimulating the Field Army to even greater zeal.

The result has been that what seemed impossible actually has been achieved. With no invested capital and with a minimum of overhead expenses or salaries the Field Army has become well established throughout the country. In Florida, organization of volunteer Field Army units is being carried into all counties as rapidly as possible. The need for supervision from the central office of the National Society has steadily decreased and has changed in nature from general problems and the determination of policies to detailed and specific questions which are being answered successfully and rapidly.

The efficiency of volunteer leadership has made a great impression on the medical profession, which, in the beginning felt some doubts as to the lasting quality of unpaid workers. But their ability to stay on the job now has been so convincingly demonstrated that all doubts have been removed.

In 1944, after marked success in reaching women with the cancer message, the Women's Field Army became simply the Field Army. Men were brought into the organization and a lay educational program for men as well as women was initiated.

Today great strides have been made in educating the public in cancer control. One of the greatest accomplishments has been the overcoming of centuries-old reluctance to discuss the subject of cancer in public. Many of the old superstitions are being broken down. Among those who have been reached with the Field Army's message, cancer no longer is regarded as a death warrant, but as an emergency similar to a small fire which must be put out before it gets out of control. National

statistics already credit the educational program of the American Cancer Society with saving the lives of some 30,000 early cancer patients each year. But the fact that from 30,000 to 50,000 others still die needlessly is today's challenge to the Field Army.

At the same time, plans now are being made for expanding greatly the program of service to cancer patients. From funds raised during the 1946 campaign in April, such projects as encouragement and support of cancer clinics, transportation of patients to clinics for treatment, free provision of special types of bandages and dressings for cancer patients, and establishment of "linen closets" containing bed linens, hot water bottles and items designed to make the lot of the cançer patient less unpleasant will be expanded.

All service projects of the Field Army will be carried out under the supervision of the State Executive Committe which considers all applications for funds to administer projects and determines what projects, in the light of available funds, will return most benefit to the people of Florida.

Florida's Field Army since 1939 has been led by the present State Commander, Mrs. Smith. Mrs. Millard Caldwell, the First Lady of the State, serves as honorary Commander. Deputy commanders are Mrs. Basil E. Kenney, Sr., of Port Saint Joe, and Mrs. Roy Frierson, of Tampa.

THE VALUE OF BIOPSY IN THE EARLY DIAGNOSIS OF CANCER

By NELSON A. MURRAY, M. D.,
Consulting Pathologist and Director of Laboratories
St. Vincent's Hospital, Jacksonville, Florida

Biopsy is the doctors' most powerful weapon to diagnose early cancer, and is the only positive method to make such a diagnosis. "Biopsy" means the removal of a piece of tissue for diagnosis from a living person. The word cancer itself comes from the Greek word meaning "crab." This origin is very appropriate, since a cancer puts out its claws and literally eats like a crab. Cancer, carcinoma, and malignant tumor are practically synonymous and mean "malicious."

More and more cures of early cancer can be effected only by the cooperation of the public and the medical profession. If you feel an abnormal lump anywhere on your body, have persistent sores which will not heal, or have persistent pain anywhere in the body, see your doctor at once. Also see your doctor immediately if you have abnormal bleeding from any body opening, have a persistent cough, loss of weight or appetite, or notice any change in the excretions of the body. If you have any of the above symptoms, there is a possibility that you may have cancer. There is no stigma attached to cancer. It is a disease just like appendicitis or whooping cough. Go to your doctor at once because early cancer can be cured in many cases. Do not treat yourself or try a neighbor's remedy. If your case is suitable for a biopsy, insist on one being done. Particularly insist on a biopsy if you have a lump in the breast or a skin sore that will not heal.

The biopsy is usually done in a hospital, but in some cases may easily be done in your doctor's office. Insist that the material taken for study be submitted to a qualified pathologist for examination. Your doctor in all probability knows a pathologist. If not, you can obtain this information from "The Directory of Medical Specialists," a book which can be found in all large hospitals and in many doctors' offices.

A biopsy can be made from almost any location on or in the body. Have this procedure carried out before any form of treatment of a suspected cancer is begun. The biopsy

material will be studied carefully by the pathologist at his microscope. This study requires highly specialized training and many years of study and experience. The field of medicine is so great that no one doctor can be an expert in all fields. The intelligent treatment of cancer necessitates the cooperation of family physician, pathologist, surgeon, and x-ray specialist.

A properly performed biopsy will in no way cause cancer to spread. Any lumps or sores of any kind selected for biopsy should be completely removed and sent to a pathologist for study. If the material is not cancer, no harm is done. If it is cancer, immediate treatment can be started.

No one knows the cause of cancer, but all doctors know that many cancers can be cured if found in time. Cancer is not contagious and no one person can "catch" it from another. There are only three accepted methods of treating cancer, used alone or together. They are (1) Surgery, (2) X-ray, (3) Radium. No types of medicine, salve, ointment, liniment, body manipulation, mineral baths, or diet have any effect on cancer. Treat all abnormal lumps and non-healing sores as cancer until proved otherwise by your family doctor and his pathologist.

Florida HEALTH NOTES

PUBLISHED BY THE FLORIDA STATE BOARD OF HEALTH

JACKSONVILLE • MAY, 1946 • VOL. 38 • No. 5
(SUPPLEMENT)

LOCAL HEALTH ISSUE

The State Board of Health

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Governor of Florida

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County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Brevard	Titusville
Broward	Ft Lauderdale
Calhoun	Blountstown
Charlotte	Punta Gorda
Clay	Green Cove Springs
Columbia	Lake City
Dade	Miami
De Soto	Arcadia
Dixie	Cross City
Duval	Jacksonville
Escambia	Pensacola
Flagler	Bunnell
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Hamilton	Jasper
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Monticello
Lafayette	Mayo
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Liberty	Bristol
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Osceola	Kissimmee
Pinellas	Clearwater
Polk	Bartow
Putnam	Palatka
Santa Rosa	Milton
Sarasota	Sarasota
Seminole	Sanford
Sumter	Bushnell
Suwannee	Live Oak
Taylor	Perry
Union	Lake Butler
Volusia	DeLand
Wakulla	Crawfordville
Walton	DeFuniak
Washington	Chipley

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Bureau of Preventable Diseases
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Division of Venereal Disease Control

Division of Industrial Hygiene
John M. McDonald, M.D.

Epidemiology
Edwin G. Riley, M.D., Ph.D.

Typhus Survey
E. R. Rickard, M.D., M.P.H.

Division of Cancer Control

Bureau of Malaria Control
John A. Mulrennan

Bureau of Maternal and Child Health

Field Technical Staff
L. L. Parks, M.D., M.P.H.

Please address all Health Notes correspondence to Ruth Stuart Allen, Editor.

Florida HEALTH NOTES

ESTABLISHED 1890

COUNTY HEALTH DEPARTMENTS AND UNITS IN FLORIDA

GEORGE A. DAME, M.D., Director
Bureau of Local Health Service
Florida State Board of Health

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The State Board of Health

Hon. Millard F. Caldwell
Governor of Florida

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Nutrition Investigations and Services
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Bureau of Tuberculosis Control
C. M. Sharp, M.D.

ACCREDITED HEALTH DEPARTMENTS

County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Brevard	Titusville
Broward	Ft Lauderdale
Calhoun	Blountstown
Charlotte	Punta Gorda
Clay	Green Cove Springs
Columbia	Lake City
Dade	Miami
De Soto	Arcadia
Dixie	Cross City
Duval	Jacksonville
Escambia	Pensacola
Flagler	Bunnell
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Hamilton	Jasper
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Montjcello
Lafayette	Mayo
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Liberty	Bristol
Madison	Madison
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Osceola	Kissimmee
Pinellas	Clearwater
Polk	Bartow
Putnam	Palatka
Santa Rosa	Milton
Sarasota	Sarasota
Seminole	Sanford
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WHAT ARE COUNTY HEALTH DEPARTMENTS AND UNITS?

A county health department is that accredited health organization or facility set up in any one county through the cooperation of the State Board of Health with the local Board of County Commissioners in accordance with the Enabling Act, with a budget and a specified minimum of types of personnel, certified as eligible by the State Merit System, employed by the Board of County Commissioners, and approved by the State Health Officer, and performing at least the basic public health programs specified by the State Board of Health and under its supervision.

A local health unit is a jurisdiction composed of one, two, or three county health departments administered under the direction of one director or health officer, who must be a medical doctor trained in public health administration. A county health officer, or director, is the agent of the State Health Officer and is directed and supervised directly or through the Bureau of Local Health Service. He is charged with the responsibility of directing his own personnel and his duties are the promotion and conservation of the health of the people within his jurisdiction.

The minimum personnel of a local health unit consists, by law, of a health officer, a nurse, a sanitary officer, and a clerk. The larger the unit, the more personnel. Large health units require also the services of a specialized personnel, such as dentists, sanitary engineers, health educators, x-ray technicians, nutritionists, etc.

HEALTH OFFICER'S DUTIES

1. Administration and supervision of all local health programs and activities, of his personnel.
2. Responsibility for surveys of the health needs of the community and development of public health programs to meet these needs.
3. Administration of health laws and regulations, both local and state.
4. Provision for programs for the control of preventable and controllable disease, including
   a. Consultation service to private physicians.

b. Isolation and quarantine.

c. Investigation of cases of communicable and controllable disease.

d. Case finding and promotion of treatment and home sanitation for the control of hookworm disease.

e. Case finding and promotion of hospitalization of individuals having tuberculosis; and supervision of contacts and suspects.

f. Case finding and promotion of treatment of persons having venereal disease.

g. Promotion of immunization of individuals against those diseases for which effective immunizing agents are available.

h. Distribution to practicing physicians of biological agents for immunization, diagnosis, and treatment of communicable disease.

5. Submission of reports to the State Board of Health in regard to the activities of the health department, and the maintaining of necessary records.

6. To do and to perform all reasonable and proper things for the promotion of local interest in public health.

7. The promotion of programs in the following twelve important fields of public health:

a. Maternal health.

b. Infant and preschool health.

c. School health.

d. Adult health.

e. Cancer control.

f. Tuberculosis control.

g. Venereal disease control.

h. Industrial hygiene.

i. Dental hygiene.

j. Nutrition.

k. Community sanitation.

l. Health education.

PUBLIC HEALTH NURSE'S DUTIES

The services of the public health nurse are available to all members of all families in her district. These services include the following:

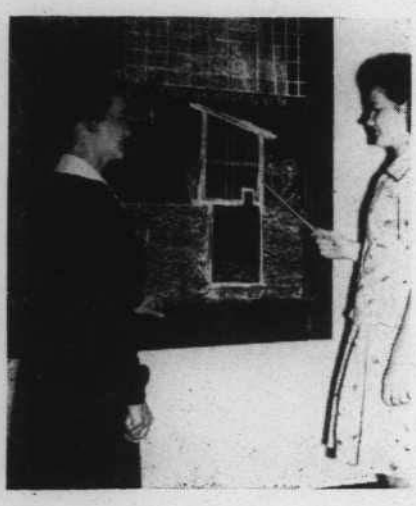
1. Maternal health.
   a. Encourage expectant mothers to secure early medical supervision and adequate care for childbirth.
   b. Assist mothers in following physician's instructions.
   c. Demonstrate necessary home nursing care for maternity cases.
2. Infant and preschool health.
   a. Promote medical and dental supervision for every child.
   b. Help the family to carry out the instructions of the physician and dentist.
   c. Assist in securing correction of defects.
   d. Assist the family in planning a healthy daily routine for the child.
3. School health.
   a. Assist teachers in planning health education programs.
   b. Assist physicians and dentists in the examination of school children and explain findings to parents, teachers and children.
   c. Assist in securing correction of defects.
4. Acute communicable disease.
   a. Assist in the instruction of parents, teachers, and other individuals to recognize early symptoms and isolate suspected cases of communicable disease.
   b. Assist in the instruction of parents, teachers, and other individuals in carrying out precautions to prevent the spread of disease.
   c. Promote the immunization of individuals against certain communicable diseases.
   d. Assist the family in carrying out the instructions of the physician.
5. Hookworm control.
   a. Assist in finding cases of hookworm infestation.
   b. Assist in securing treatment of individuals infested.
   c. Promote the installation of sewer connections, septic tanks and sanitary pit privies for the control of hookworm disease.
6. Tuberculosis control.
   a. Assist in finding cases of tuberculosis.

Important person in the local health department is the public health nurse. Here we find a Dade County nurse checking with a young "potential" tuberculosis patient whose father's case was discovered during a recent TB survey. Entire family reports regularly to a private technician for x-rays under the supervision of the local health unit. (Photo by RSA)

b. Assist in securing hospitalization for cases of tuberculosis.

c. Assist in teaching the family and patient the precautions to be taken to prevent the spread of the infections.

d. Demonstrate home nursing care where necessary.



Home sanitation and the control of hook worm disease is "tops" among the jobs of a good portion of Florida's local health departments. Programs have a number of approaches. First, and to the left is the sanitary pit privy. This is a standard house, but it is the pit which is so important. The hook worm germ when imprisoned in a deep concrete pit die a natural death, while in the old-type they easily make their way to the surface and quickly pierce the tissue of the first bare-foot child passing by. A "demonstrator," this privy was built by the sanitation students of the In-Service Training School at Gainesville.. To upper right is the old insanitary sort, known as the open pit.. It is a Duval County project.

Lower right is an important approach —through the schools. Here the junior high youngster is showing Mrs. Bertha Wolfe, Baker County PHN, her interpretation of the "right sort" of privy. Note the deep pit. It is estimated that 30 per cent of all rural WHITE children are infested with hookworms. It is also said that there are over 50,000 clinical hookworm cases in Florida.

The well baby conference, as the clinics checking youngsters with an eye to keeping them well are known, is the pride and joy of most local health departments. Children are given general checks, immunization and so on. This is an excellent channel for passing on health information because parents who bring their children to these clinics are in a receptive mood for suggestions and are eager to take necessary preventive measures to keep their babies well. This picture was made by Deane at the Beaches Health Center, Duval County.

7. Venereal disease control.
   a. Assist in finding cases of venereal disease.
   b. Assist in bringing persons having venereal diseases under treatment.
   c. Promote continuous treatment.
   d. Assist in teaching family and patient precautions to be taken to prevent the spread of the infection.

8. Cancer control.
   a. Assist in finding cases.
   b. Assist in securing biopsies, x-rays, and necessary hospitalization and operations.
   c. Distribution of information with a view to teaching the necessity of securing diagnosis early.

9. Dental hygiene.
   a. Information on necessity of dental care.
   b. Assist in referring correctible conditions to dentists and clinics.

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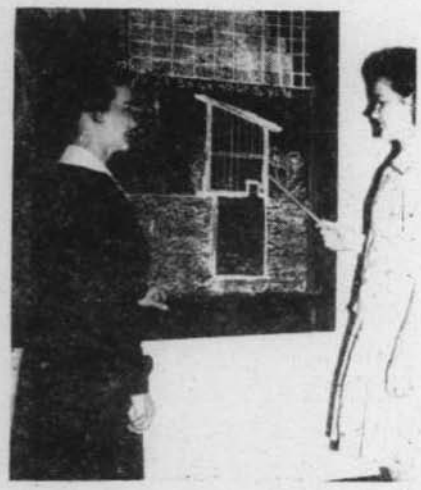

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9. Dental hygiene.
   a. Information on necessity of dental care.
   b. Assist in referring correctible conditions to dentists and clinics.

10. Nutrition.
    a. Information on raising standards of nutrition.
    b. Referral of apparent cases of nutritional deficiency to clinics and to family physicians.
11. Crippled children's services.
    a. Help secure examination and treatment of crippled children.
    b. Demonstrate to the family the necessary nursing care needed by the child.
12. Industrial hygiene.
    a. Assist in teaching personal hygiene and disease prevention to groups of employees.
    b. Assist in testing and immunization programs in industry.

SANITARY OFFICER'S DUTIES

1. Promote adequate disposal of human excreta for the purpose of controlling hookworm and other intestinal diseases.
    a. Establishment of sewerage systems.
    b. Extension of services of sewerage systems.
    c. Building of septic tanks and sanitary privies in rural areas.
2. Promote the development of safe water supplies for the purpose of controlling water-borne diseases.
    a. Establishment of municipal water supplies.
    b. Extension of services of existing municipal water supplies.
    c. Reconditioning of existing wells in rural areas.
    d. Consultation services relative to new rural water supplies.
3. Promote a healthful environment of schools.
    a Waste disposal.
    b. Water supply.
    c. Ventilation.
    d. Heating.
    e. Lighting.
    f. Sanitation of school lunch departments.
4. Promote a safe milk supply for the purpose of controlling milk-borne diseases.
    a. Inspection of dairies.
    b. Inspection of pasteurization plants.

This picture reminds us that "you're never too old" for immunization. This young Jax Beach ball player is getting fixed up in order to be in fine fettle for the football season. This photo shows a private physician giving the immunization. The health department immunizes all persons seeking that protection.

(Photo by RSA)

All accredited local health units carry on a food handling establishment inspection service. . . Too much stress cannot be laid upon the ability of the sanitarians in "get along" with the owners. The State Board of Health often gives the local departments a lift by furnishing an elementary course in food handling sanitation. . . Here we see Dr. Reed, director, Escambia County Unit, conferring with three important Pensacola restaurant owners about such a school which was conducted toward the end of 1945.

(Photo by RSA)

5. Promote the control of rats for the purpose of controlling typhus fever.
   a. Inspection for infestation.
   b. Rat proofing of buildings.
   c. Rat extermination.
6. Promote the sanitation of food-handling establishments.
   a. Sanitary inspections.
   b. Food-handlers classes.
7. Promote the sanitation of private premises.
8. Promote the sanitation of recreational facilities.
   a. Inspection of swimming pools.
   b. Inspecton of camps.
   c. Inspection of parks.
9. Promote the sanitation of tourist and trailer camps.

CLERK'S DUTIES

1. Distribution of literature, biologics, and other materials.
2. The keeping of adequate records.
3. The making of reports.
4. The necessity of keeping headquarters neat and attractive.
5. Correspondence and filing.
6. Keeping a financial record.
7. Maintaining cordial relations between health office visitors and the personnel of the unit.

THE PROCEDURE FOR ESTABLISHING A LOCAL HEALTH DEPARTMENT

The procedure for establishing a local health department may be stated in four logical steps:

1. The people of a county must express, through a resolution adopted by their Board of County Commissioners, a desire to establish a health department in cooperation with the State Board of Health.

   The need for a public health program is often first recognized by alert civic groups and volunteer agencies, and

Left: The installation of septic tanks as a means to control hook worm and other diseases is also being pushed in the State. Here we see Chief Sanitarian Castleberry of Duval County supervising the installation of a tank. The "rig" with which the tank is being lowered is privately owned but in some counties where there is no private ones available the health departments have bought their own. (Photo by RSA)

through their activities brought to the attention of the people and the county officials.

2. Upon receiving from a Board of County Commissioners a resolution requesting assistance in the establishment of a health department, the State Board of Health will make a study of the population, health needs and resources of the county to determine the public health personnel and budget necessary to meet these needs.

   If the population is small or resources meager, it may be found advisable for the county to cooperate with one or more adjoining counties in the establishment of a two or three county health unit. In such a case, a separate health department with separate nursing, sanitation, and clerical personnel would be established in each county cooperating. They would be administered, however, as a single health unit by a single health officer.

   If the population and resources are sufficient, it may be found advisable for the county to establish a county health department to operate alone as a single administrative unit. This must be determined by the State Board of Health.

3. The Board of County Commissioners and the State Board of Health must agree on a budget for the proposed health department.

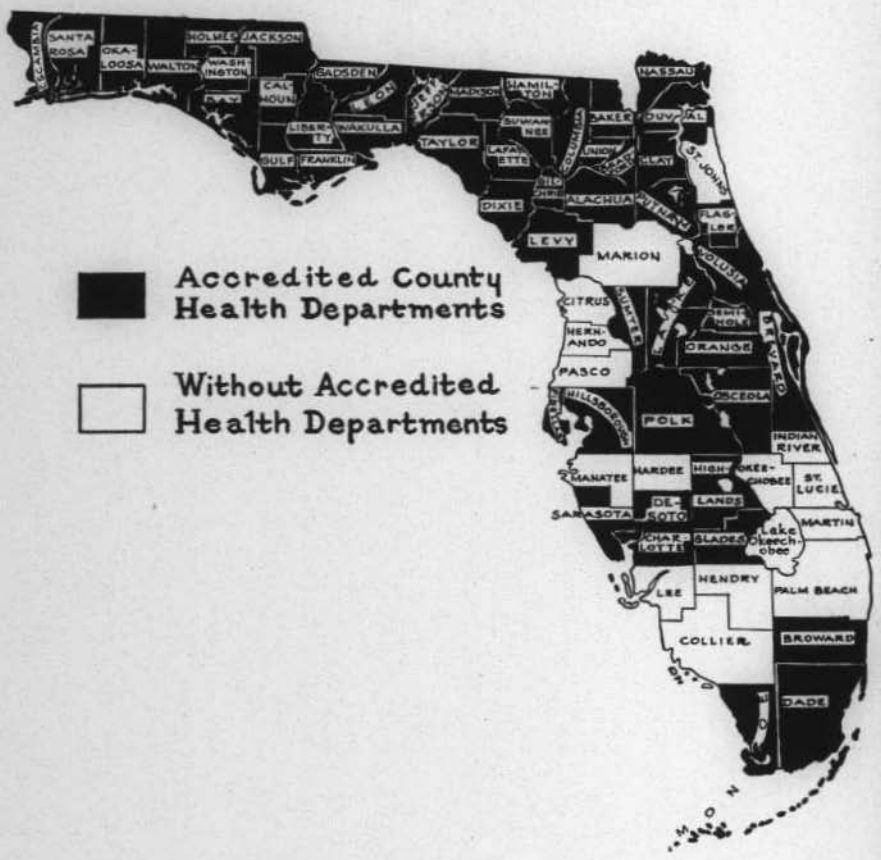
The State Board of Health has found that it is not a sound policy to establish a county health department unless the county is prepared to contribute a minimum of fifty cents per capita. In the smaller counties the per capita requirement may be larger. Thus, a county of 20,000 population should, as a beginning, contribute not less than $10,000. This sum may be derived from several different sources within the county, such as the Board of County Commissioners, the Board of Public Instruction, cities, social agencies, etc. Each contributing agency agrees by resolution and budgets to contribute a specific sum at a definitely stated time. It is desirable that eventually all county contributors contribute by or through the Board of County Commissioners.

The State Board of Health in turn contributes to the budgeted expenses of the proposed county health department in accordance with an established formula. A separate account is established with the State Treasurer to the credit of each county health department when the first local contribution is received. All county and state health contributions to a county health department are credited to its account. All county contributions remain always the property of the county and such funds are under no condition recapturable by the State, nor can funds of one county be spent in another county.

4. The Board of County Commissioners must employ a health officer from qualified applicants. The health officer will then select his staff from qualified applicants and recommend them to the Board of County Commissioners for employment. It is understood that suitable quarters for housing the health department's office will be made available by the county.

Dental health is of paramount importance and many units maintain their own clinics. Here you see the three equipped trailers operated by the Bureau of Dental Health, State Board of Health. Standing, left to right, are Dr. Drew Turner, director of the Bureau, Miss Elizabeth Spears, secretary, and Dr. J. E. Urich, assistant. (Photo by RSA)

STATE OF FLORIDA



Florida HEALTH NOTES

PUBLISHED BY THE FLORIDA STATE BOARD OF HEALTH

JACKSONVILLE • JUNE, 1946 • VOL. 38 • No. 6

MALARIA CONTROL IN FLORIDA

The State Board of Health

Hon. Millard F. Caldwell
Governor of Florida

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County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Broward	Ft. Lauderdale
Clay	Green Cove Springs
Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
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Malaria Research
Mark F. Boyd, M.D.
Rockefeller Foundation
Tallahassee

Bureau of Maternal & Child Health
Lucile J. Marsh, M.D.

Florida HEALTH NOTES

ESTABLISHED 1890

MALARIA, A SCOURGE

Malaria has earned the reputation of being the worst scourge of mankind. Dr. Henry Rose Carter, dean of North American malariologists, once stated ". . . the loss of efficiency caused by malaria, in malarious sections of the South, is beyond comparison greater than that caused by any other disease, or even by any two or three diseases combined."

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Every channel of malaria control is pursued in Florida, ranging from dredging and fill-ins to spraying with DDT inseticide. Here we show a section of a ditching project under way in the campus of the State University at Gainesville. Note the junction of the ditches which are carrying away what would otherwise be a sluggish and virtually stagnant water.

MALARIA AT THE CROSSROADS IN FLORIDA

The disease which once laid a heavy hand on the citizenry of Florida has reached an all-time low. Only twenty-two deaths were reported from this malady in 1945. This cannot be classed as an exciting number of deaths when compared with the two highest epidemic years on record, 1919 and 1929, when 440 and 470 deaths were reported. However, in view of the foregoing, malaria may spring up in towns and in rural areas where an abundance of malaria-carrying mosquitoes are allowed to come in contact with and bite human beings.

The one factor which complicates the picture at this time is that a great number of service personnel have returned to the State as active malaria carriers. These individuals may remain carriers for several years because it has been shown that military personnel from the Pacific area have relapsed after a three year period, and it has been demonstrated that the malaria-carrying mosquito found in Florida is capable of transmitting some of the foreign strains. Therefore, it is reasonable to expect that malaria may possibly flare up in certain sections of the State.

Records show that following wars, infected troops have brought malaria into communities where it had hitherto been unknown and outbreaks were started as a consequence. Troops from the first World War disseminated malaria to many countries of Europe and as far as Australia. Dr. L. W. Hackett of the Rockefeller Foundation stated that malaria "dogged the footsteps of returning soldiers to their homes and infected countrysides whose inhabitants had never known the bitter taste of quinine. In Russia there appeared the most terrible epidemic of modern times, comparable only to those of North India, and in Italy a recrudesence occurred in areas long free from the infection, with the loss of decades of patient and hard-won progress. Secondary cases began to appear in England, while in such an unlikely place as Emden on the North German coast there was an epidemic of 5,000 cases."

One classic example of what can happen when a malignant species of malaria is introduced into an area where a mild species of the disease was formerly present has been aptly stated by Col. C. F. Craig, noted Army Surgeon: "In the State of Connecticut, in 1898, the only species of malaria plasmodium present was

P. vivax and benign tertian malaria was endemic in the locality for many years. After the end of the Spanish-American War, a company of the National Guard from this locality, the men of which had been on duty in a southern camp where infections with **P. falciparium** were numerous, returned to their homes. Within a few weeks cases of infection with this plasmodium began to appear, and before the end of August an epidemic of estivoatumnal malaria had occurred, with a few fatal infections."

A typical example of a small epidemic in this country in an area long free of malaria into which the disease was introduced by a carrier, can best be described in the outbreak which occurred in 1935 at Aurora, Ohio. The records show that no cases of malaria had been reported in this town since 1920, when over a period of about two months, 37 cases of benign tertian malaria suddenly appeared. **This outbreak was attributed to a malaria carrier from Florida who had settled in the area where a heavy population of Anopheles quadrimaculatus was present.**

It can be seen from some of the experiences above that the next two or three years are very crucial ones from the standpoint of malaria transmission because of the returning troops, a number of whom are malaria carriers and some of whom may remain infectious to mosquitoes for a considerable period of time.

Malaria should and can be controlled but it will mean that every individual has a responsibility that must be fulfilled if this disease is to become a rare entity in the State. The final solution is dependent upon, (1) the preventive measures carried out by the individual and (2) the measures conducted on a community basis.

There are many ways in which individuals may protect themselves as well as their fellow men. Listed below are some of the ways in which protection may be afforded.

(1) The individual should exert every effort to see that his home is completely mosquito-proofed.

(2) If a person lives in a mosquito-proofed house in an area where the population of malaria-carrying mosquitoes is reported to be high, spraying the interiors of the rooms as well as the screen doors, porches and all outbuildings with a 5 per cent DDT insecticide is recommended.

(3) All homes not mosquito-proofed should by all means be sprayed with a 5 per cent DDT insecticide. All outbuildings should receive the same treatment. It would appear advisable to make the first application in March or April and the second in August or September.

(4) Where the wall and ceiling surfaces are not sprayed with DDT, the use of aerosol insecticide bombs or mosquito sprays should be used daily in the home to destroy all mosquitoes.

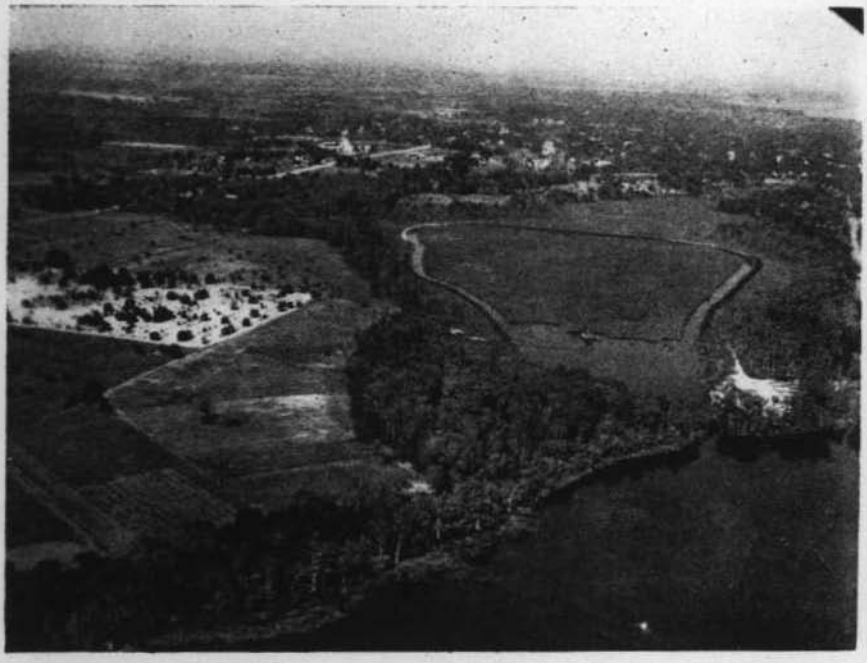
(5) People should not expose themselves to the bites of mosquitoes between the hours of dusk and dawn.

(6) The individual who frequents the "Honky Tonk" on the edge of town in the evening should apply a repellent in order to protect himself from the bites of mosquitoes. The fisherman should always carry an aerosol bomb as well as a bottle of mosquito repellent, otherwise he stands a good chance of contracting malaria around the fishing camp.

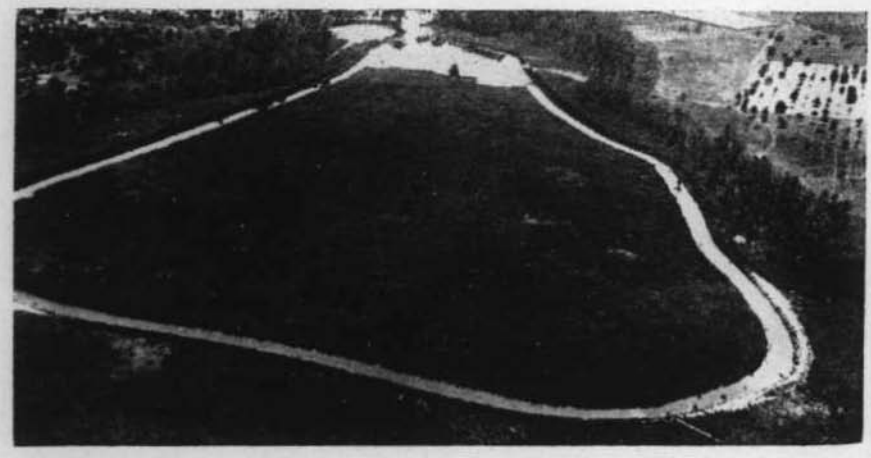
(7) Remember that malaria is not caught in the swamp or woods—distant from habitations—because the chances are mosquitoes have not had an opportunity to feed on humans under these circumstances. The greatest percentages of cases are contracted in small villages, around fishing camps, and in cities. It may be contracted in your own home, if in a rural area, should your home be located near your neighbors.

(8) The individual who has been diagnosed as having malaria should protect himself from the bites of mosquitoes, because a person may feel well and yet be a malaria carrier. **Such a carrier could visit a public meeting place where malaria mosquitoes are abundant and during the course of one evening might infect mosquitoes which in turn, after a period of time, might bite and infect a great number of other persons.**

(9) It is absolutely essential that all public meeting and eating places be carefully mosquito-proofed and, as an added protection for the public, the buildings should



Probably the most ambitious job in mosquito control in Florida is at Leesburg. In picture No. 4 we show the tremendous dredging job and in the background the city of Leesburg proper. The marshy, mosquito breeding ground comprises about 80 acres and before the current project was begun was a discouraging condition for residents of the city.



In picture No. 5 is a close-up of the section. Note the dyke which has been thrown around the projet. All the marshy interior is being dredged and pumped out, filling in the surrounding low ground, thus creating considerable property of monetary value. When completed the one-time waste land will be an arm of the large conneting lake, and one of the State's worst mosquito breeding grounds will be forever eliminated. (Photo by RSA).

have the interiors of the rooms sprayed each morning with a good mosquito insecticide in order to destroy mosquitoes which might have gained entrance. The space spraying will not be necessary if the walls have been sprayed with a 5 per cent DDT insecticide.

(10) Remember that by using common sense and good judgment you may protect yourself from contracting malaria chills and fever.

The control of malaria in villages and large towns is a community responsibility and the method of approach is one of permanent elimination of the anopheline mosquito where practical. Some of the procedures that must be considered are:

(1) The complete elimination of breeding areas by installing permanent drainage systems.

(2) The filling of low areas which cannot be drained.

(3) The elimination of aquatic vegetation from permanent bodies of water.

(4) The use of larvicides in permanent bodies of water. The selection of the larvicide will depend on several factors such as cost, type of area to be treated and threat to wildlife. The material cost varies considerably, ranging from $3.00 per acre for fuel oil, to 55 cents per acre for paris green and 5 to 10 cents per acre for DDT larvicide.

The first use of DDT for malaria control among civilians was inaugurated in March, 1945. It was restricted to the ten counties known to have had the highest rate of malaria in the past and which currently had the largest "population" of the disease-carrying mosquitoes.

Between the opening of the program and up to its close in October, 23,814 houses were sprayed with DDT. As some of the houses were resprayed, a total of 31,727 individual applications were made, consuming 70,605 pints of 35 per cent DDT emulsion concentrates. About fifty men participated in the program.

Today a more extensive control program is being carried on in twenty-three of the most malarious counties located in the central western section of the State. Forty-two crews comprising 150 highly trained men are carrying on the work.

The program consists of spraying the interior of unscreened houses with a 5 per cent DDT spray in those sections of the county where the malaria-carrying mosquitoes are known to be present in sufficient density to causes transmission. In the large cities larvicides are being spread on the breeding areas, which consist of ponds, lakes, streams and swamps, in order to destroy the malaria-carrying mosquito in the immature stage.

It is planned to apply two applications of DDT spray to approximately 43,000 houses in 23 counties selected for this coming year's operations. The houses are to be sprayed with 5 per cent DDT, xylene, triton, water emulsion spray.

The 23 counties chosen for DDT spraying range in the national malaria death roster of 1933-37 from first to 175th place in the country. They are: Jefferson, Jackson, Madison, Marion, Gadsden, Suwannee, Dixie, Leon, Columbia and Hamilton. Citrus, Alachua, Levy, Holmes, Sumter, Wakulla, Gilchrist, Taylor, Calhoun, Washington, Walton, Hernando and Lafayette.

The basic formula for the consentrate used in our program is given below:

Formula

DDT	3 lbs.
Xylene	3 qts.
Triton x-155	3 fl. oz.
Makes	1.03 gals.

The formula contains about 35 per cent DDT. The concentrate is mixed with water, 1 to 6 parts respectively. The resulting emulsion is a milky appearing liquid. In order to make the concentrate it is necessary to agitate the liquid until it becomes clear. This is best accomplished in a rocker barrel, or any method where proper agitation is obtained.

Individuals may treat their own homes with DDT and make walls and ceilings deadly to mosquitoes and other insects by following the directions given below.

Materials

There are three types of commercial mixtures of DDT which are satisfactory for the spraying the interior wall and ceiling surfaces.

In March, 1945, DDT was released by the War Production Board for use in mosquito control among civilians. Previously, it had been used entirely for military purposes, mostly in and around military installations. The spray crews in the ten counties chosen for the work were preceded by an educational crew which explained the program to property owners and housewives. A very healthy cooperation was therefore received, and when the spray crew arrived, furniture was usually piled in the middle of rooms and houses were in readiness for the application. Picture No. 6 shows a crew member helping a housewife put the finishing touches to a room by covering the furniture with a large canvas. (Photo by RSA)

1. DDT oil base sprays.
2. DDT emulsion concentrates.
3. DDT wettable powders.

The DDT in an oil base can be purchased in a 5 per cent oil solution and also in a concentrated solution of higher percentage. These high percentage DDT oil concentrates can be cut down with odorless, water-white kerosene to make a satisfactory spray material. This material is recommended on surfaces which might be stained if DDT water solutions are used—such as wall paper and interiors painted with some cold water paints.

The emulsion concentrate is the most widely used because it is cheaper and there is less danger to the operator from the standpoint of absorption as it is believed possible when DDT dissolved in an oil base is used.

The third DDT material which is receiving wide use as a livestock spray as well as an agricultural spray is the wettable powder which has DDT present in different percentages. This powder when stirred into water forms a suspension and with a little agitation will remain in suspension. This material is effective when applied to brick and concrete wall surfaces. To make a 5 per cent spray from a 50 per cent DDT wettable powder mix two pounds of the powder with 2½ gallons of water.

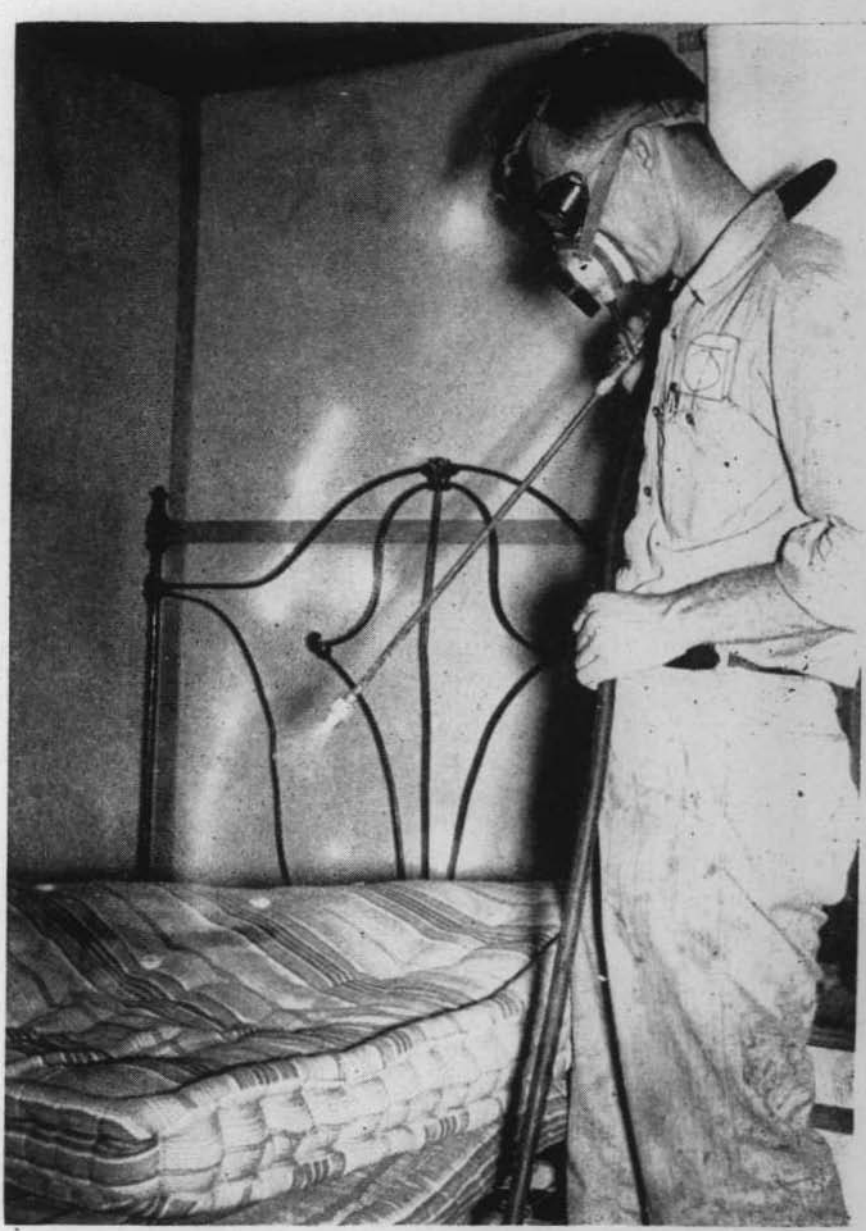
Equipment

The most essential equipment in the application of the DDT insecticide to the wall surface is the spray nozzle. The type which is being most widely used is Type ¼ T 8002.*

Spraying

In spraying, the nozzle should be held about 18 inches from the surface and moved at the rate of one linear foot per second, which enables approximately 190 square feet per minute to be covered. It is necessary to use the speed method since some wall surfaces absorb the spray faster than others, and it is therefore impossible to judge as to proper application from the appearance of the spray on the walls. Approximately one gallon of 5 per cent DDT spray solution should be applied to 1,000 square feet of wall surface to obtain the proper coverage. This application of DDT should remain effective for mosquitoes for at least four months and possibly longer.

*Sold by Spraying Systems Company of 402 West Lake Street, Chicago 24, Illinois, at $1.80 each.



A mattress getting a "good dose" of DDT. If you will look closely you will see the gleaming spray gushing from the nozzle and shining on the wall. (Photo by RSA)

The following precautions should be taken before a house is sprayed:

1. Extinguish all flames.
2. Cover all foods and dishes, and remove from cupboards that are to be sprayed.
3. Cover all varnished floors.
4. Cover furniture with blankets or cover cloths.
5. Remove pictures from the walls.
6. Pull down shades to prevent spotting of the window panes.

Safe practices should be followed in spraying with DDT.

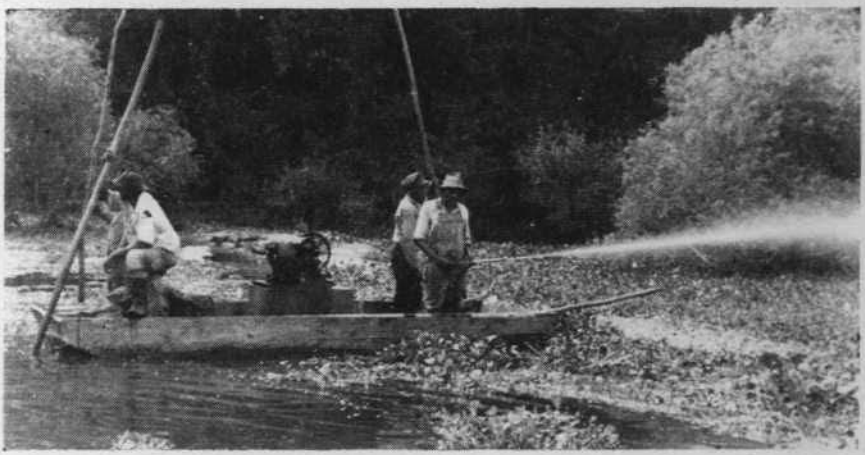
1. Wear proper clothing to cover the body, also a wide-brimmed hat and moisture-proof gloves.
2. Wear goggles to protect the eyes and a respirator to protect the lungs.
3. Do not spray children's toys, baby beds, high chairs, food, dishes or rooms occupied by a sick person or a young baby.
4. Wash face and hands frequently in soapy water.
5. Use a greaseless skin lotion to prevent chapping.
6. Everyone but the operator should leave the house when the walls are being sprayed and remain outside for 30 minutes.
7. If DDT is swallowed drink mustard water to induce vomiting. (One tablespoon dry mustard in a glass of warm water. Consult a phsician at once.)

So far as is known, no person has ever been poisoned by DDT. Dizziness and skin rashes have been observed on individuals who were engaged in spraying for long periods, but this trouble is attributed to xylene exposure.

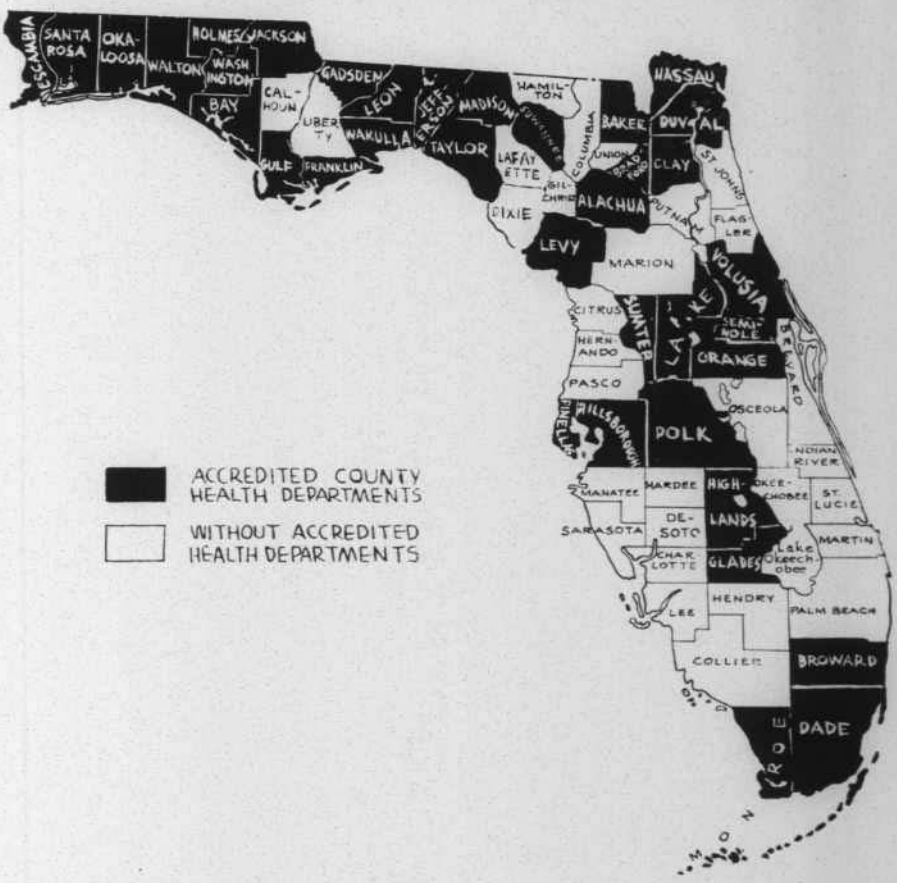
It has been stated that a baby would have to lick about 10 square feet of treated surface to suffer any ill effects.

DDT is a marvelous insecticide and properly used will aid materially in stamping out malaria.

Malaria is a menace to the people of areas where it is prevalent. It is a devitalizing disease which has caused much sickness and suffering and is without a rival among the diseases affecting man. It is therefore essential that it become, through our continued efforts, a mere curiosity to the medical and public health officials in this State.



Here are shown workers on the job, spraying water hyacinths on the Alligator Lake at Lake City. The project is considered important and successful for this lake in particular has been a hot bed for malaria carrying mosquito breeding. (Photo by RSA)



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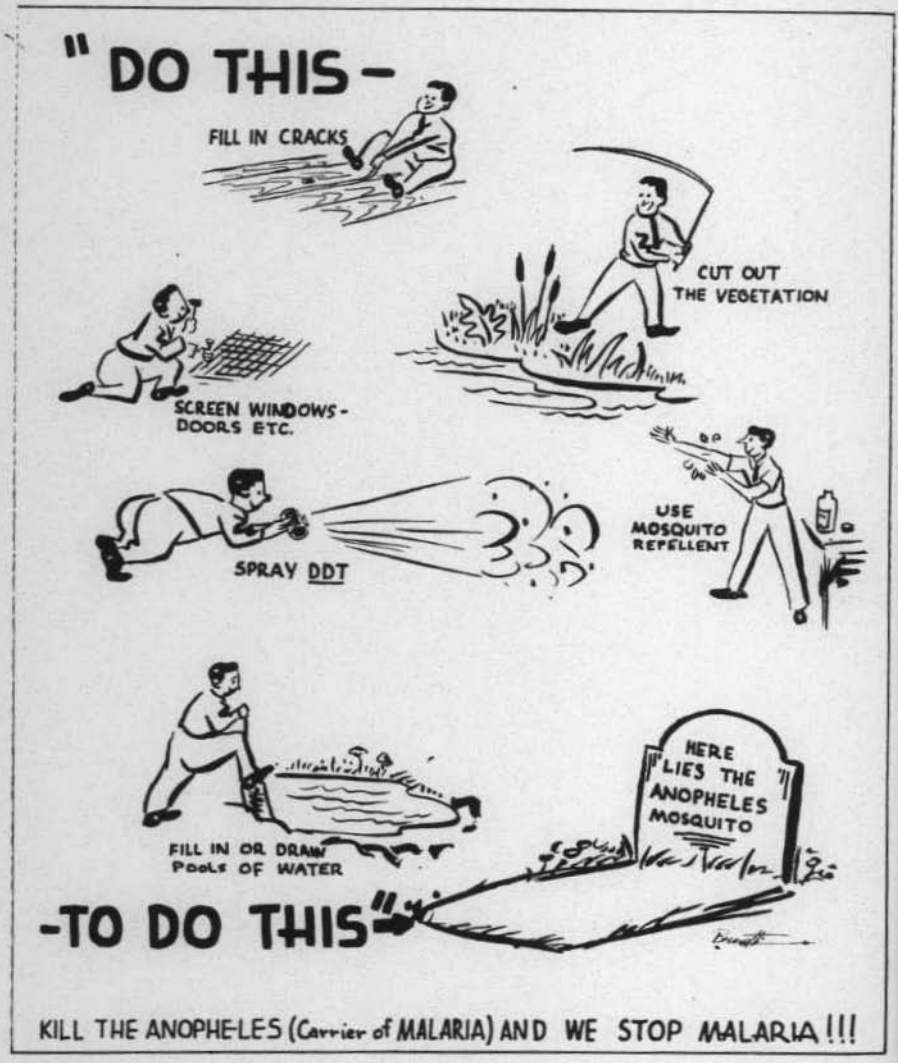

J. A. Mulrennan, director, Malaria Control Bureau, declares that if every community and every individual will follow artist Brunetti's suggestions in the above cartoon, not only the anopheles mosquito which carries malaria, but others as well will be controlled. Look at this cartoon again and remember the six steps which will eliminate mosquitoes from your community. (Photo by RSA).

Florida HEALTH NOTES

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JACKSONVILLE • JULY, 1946 • VOL. 38 • No. 7

PASTEURIZED MILK ISSUE

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Baker	Macclenny
Bay	Panama City
Bradford	Starke
Broward	Ft. Lauderdale
Clay	Green Cove Springs
Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
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Jefferson	Monticello
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Pinellas	Clearwater
Polk	Bartow
Santa Rosa	Milton
Seminole	Sanford
Sumter	Bushnell
Suwannee	Live Oak
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Florida HEALTH NOTES

ESTABLISHED 1890

YOUR MILK SUPPLY

A PROBLEM FOR INDIVIDUAL AND COMMUNITY ACTION

The war years saw a tremendous increase in milk consumption and appreciation of the nutritive value of milk. An adequate, safe and palatable milk supply is one of the three great environmental sanitation problems that must be considered by every family and municipality. The other two are the water supply and waste disposal.

Greater milk consumption cannot be urged and attained until a SAFE and adequate supply is available in every community. Every year 30 to 50 milk-borne disease outbreaks are reported. It has been stated that a community gets the milk supply that it "demands." We urge every family to "shop around" and use the services of the local health departments to determine the status of its milk supply.

The policy and program of the Bureau of Sanitary Engineering of the Florida State Board of Health is to promote and encourage the production, processing, distribution and consumption of Grade A Pasteurized Milk that is under an active supervising local county health department. Where pasteurized milk is not available, Grade A raw milk is recommended to be as safe as it is POSSIBLE to have RAW milk.

The consulting and advisory services of the Bureau of Sanitary Engineering is made up of these essential elements:

1. Promote local and county adoption and enforcing of milk control programs.
2. Plan and set up milk programs and arrange for sampling and testing schedules with the central and branch laboratories.
   Encourage and promote local milk production to meet the milk shortage in Florida.
4. Examination and approval of plans for new dairies.
5. Inspection and control of high-temperature pasteurizers, interstate carriers, and institutions.
6. Teach milk sanitation and control to local sanitarians.
7. Make sanitation compliance survey ratings of local control.
8. Lectures, talks, discussions with industry and lay groups.
9. Cooperate with the milk section of the Department of Agriculture.

David B. Lee,
Chief Sanitary Engineer.

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MILK—FOOD OR POISON?

By S. A. LEAR, Ph.D., and J. L. MINKIN, M.S., *Milk Consultants, Bureau of Sanitary Engineering, Florida State Board of Health*

The quick grasp of a mother's hand for the milk bottle which is left on the doorstep by the milkman while hurrying on his way is a silent tribute to the development of milk control programs by health authorities in Florida. Gone is the belief that the consumer receives skimmed milk while the dairyman gets all the cream, and gone, too, is the fear that **cold** milk is **old** milk. The production and processing of milk has been so developed and supervised that clean, safe milk is available to all persons who demand it. But **they must** demand it.

It was recognized very early that milk which is an excellent food for man could contain certain small organisms which caused man to sicken and die. Consequently, laws were enacted in the interest of public health which restricted the activities of the individual dairyman. Originally the dairyman violently resisted this legal trend to control their product. As time passed on these laws were found valid time and again by the United States Supreme Court. Most of the decisions rendered point out that the health of the general public is of paramount importance and that an individual's freedom of action must be modified in accordance with the demands of the community in which he lives. Dairymen gradually realized that while laws tended to restrict the independence of their actions they also gave them a definite amount of protection. For example, all dairymen who sell pasteurized milk must keep a written record to show that the milk has been properly pasteurized. These records are evidence that the dairyman is complying with the law and if anything goes wrong he cannot be charged with being negligent.

There are many excellent laws for the purpose of insuring safe milk supplies but their practical value depend upon the milk sanitarian who is responsible for enforcing them. Because the dairyman and milk sanitarian have a common objective they usually operate as a team and the dairymen have learned to look to health authorities for help and guidance. Together solutions are found for all of their problems. As milk control programs advanced the need for better trained men was noted. Today many sanitarians are college trained and have earned degrees in this specialized field. They have initiative, tact, good

judgment and resourcefulness. All of these attributes are needed in field work and are essentials for a successful milk control program.

The milk program for the Florida State Board of Health is centered around city and county health units which have been established in Florida with qualified personnel for solving milk problems. The local milk sanitarian regularly inspects the farms and pasteurizing plants. The former are checked to be certain that good clean milk is being produced. The latter to determine whether or not the milk is properly pasteurized and processed. Samples of milk are collected for laboratory analysis to check the accuracy of the field work and for new data. Complaints

An entire section of the State Board of Health's central laboratory is devoted to the testing of milk. Here we see Miss Lena Stark taking a sample of milk which, when it has passed through the many tests she will give it, will denote its productive background and whether it is safe for human consumption. (Photo by RSA).

are received and all questions in regard to the milk supply are given careful consideration. This work yields information on all milk supplies and helps the sanitarian to do his job. The public can materially assist the milk inspector in protecting its health by immediately calling his attention to all unsatisfactory cases.

The sanitarian considers many items of sanitation when he inspects a dairy farm. They are listed under the following subjects: cows, dairy barn, milk house, toilet, water supply, utensils, milking and miscellaneous. Special attention is invariably given to the physical condition of the cow and her udder. This is done because experience has demonstrated that it is possible to transmit pathogenic bacteria from the cow's body to humans via raw milk. Two well known diseases which can be transmitted in raw milk are tuberculosis and undulant fever. We are fortunate in that the number of cows infected with tuberculosis is very low in Florida. The same cannot be said for Bangs. Bangs disease in cattle is quite prevalent and can cause Undulant Fever in man. It is well to remember that the carcass of a Bang's infected cow is capable of transmitting bacteria that cause Undulant Fever to anyone who handles the meat. This may explan why some people get Undulant Fever even though they drink only pasteurized milk. Improperly cooked meat is just as dangerous as raw milk in this respect. Many city milk ordinances require that all milk entering the town must come from TB and Bang's free herds.

The construction and operation of dairy barns have progressed so satisfactorily that "shade tree" milk is only recalled by an older generation. This term was frequently applied to milk obtained from a cow which was standing in the shade of a tree and milked out in the open with the milk exposed to flies, dust and dirt. Such insanitary conditions were corrected with the advent of newly constructed barns.

The development of milk houses has kept pace with the growth of dairy barns. They are spacious, well screened, and have plenty of both natural and artificial light, and all floors and most of the walls are made of an impervious material. Milk coolers are available for cooling the milk to 50 degrees Fahrenheit or less and for maintaining it at that temperature to prevent bacterial growth. Large vats are present for holding chlorine solution, hot water and cold water. The piped in water comes from protected wells which are required to be inspected. Water samples are taken semi-annually to determine whether or not the wells are good. All of these conditions and factors help the

dairyman produce a good, clean milk. Modern highways, refrigeration trucks and tank cars have made it possible to haul milk quickly to spic and span pasteurizing plants without any harm to the product.

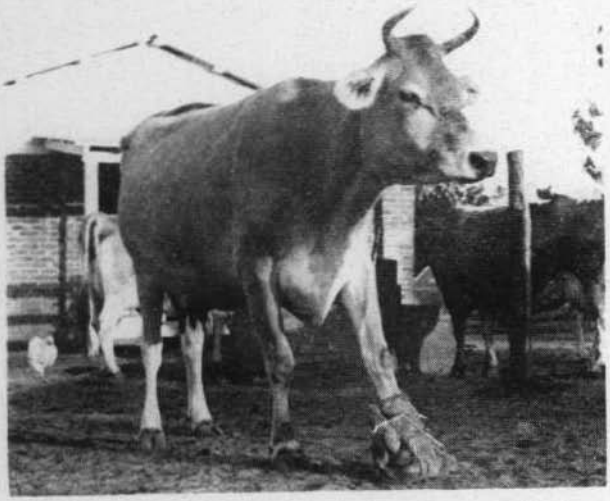
After the milk is brought directly to the pasteurizing plant, it is first subjected to "platform inspection." At this time the sanitarian usually examines the milk to see if its appearance is normal and clean. He smells it to determine if any off flavors are present, such as garlic, feed or unclean.

Frequently a lactometer is floated in the milk to find out whether or not water has been added. Also the temperature may be checked to make certain that it is less than 50 degrees Fahrenheit and that the milk has had proper care since it left the farm. In addition a sample is collected for laboratory examination which will reveal tell-tale evidence of how the milk was produced and handled when the inspector was not there. After pass-

A Bang's disease-free herd is a MUST in the production of pure milk. The disease in cattle is passed on to humans through milk in the form of Undulant Fever. It is so highly contagious that persons even handling the infected meat may contract the disease. This picture shows a veterinarian taking a sample of blood from a cow in a small herd, whose milk is used only for home consumption. Control of the disease, however, is as important in the latter as when the milk is produced commercially. (Photo by Lear).

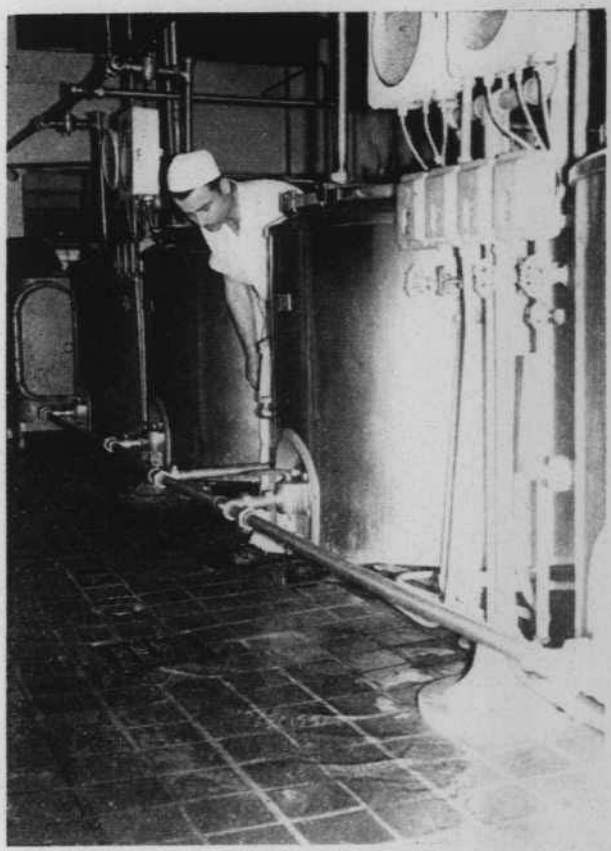
ing platform inspection the milk is taken into the plant. The pasteurizing plant is usually constructed of some impervious material such as concrete block. All surfaces are smooth, light colored and washable. The floors are usually made of either concrete or tile. Of course plenty of light and ventilation are present together with an adequate water supply and toilet facilities. The milk enters the plant through a small fly-tight opening into what is called the receiving room. Here the milk is poured into a weigh tank or receiving vat and starts its trip through a wonderland of stainless steel pipes, vats and other pieces of equipment. After leaving the receiving room in stainless steel pipes it goes to the pasteurizer where it is heated to and held at the proper temperature for the required length of time. The word pasteurized refers to the process of heating every particle of milk to at least 143 degrees Fahrenheit, and holding at such tem-

The above building is an excellent example of a modern dairy barn. We are sorry not to be able to show some of the interior shots because facilities are as up-to-date as the outside. However there are important features such as impervious walls and floors, piped-in water, and large, screened windows. Dairymen take great pride in their modern barns because they make for easier and more sanitary methods of milk production. (Photo by Lear).



The above picture might be termed "negative" in this issue of Milk Control. However, it assumes the "positive" when we report that when this picture was made, the cow, with a badly diseased hoof, was actually being milked, and that milk was being passed on to unsuspecting customers. Cases like this are just a few reasons why folks are urged to buy milk from reputable dairies, and also to buy PASTEURIZED MILK. (Photo by Lear).

perature for at least thirty minutes or to at least 160 degrees Fahrenheit and holding at such temperature for at least fifteen seconds, in approved and properly operated equipment. The object of pasteurization is to kill all disease producing micro-organisms that may have succeeded in passing all of the safeguards previously erected. **It is not the purpose of pasteurization to salvage dirty or sour milk.** One may hear that pasteurization gives milk an off flavor or destroys its food value. The first objection is very often fanciful but if a **fact** is due to improper processing. The busy operator may let the temperature go too high or hold the milk at pasteurizing temperature too long. The value of the second objection is greatly overemphasized. Practically all of the nutritional loss if any is in vitamin C. This is not serious because even fresh milk is not considered as one of the better sources of vitamin C. Most doctors recommend fresh fruit juices in the diet which are excellent sources of this vitamin.



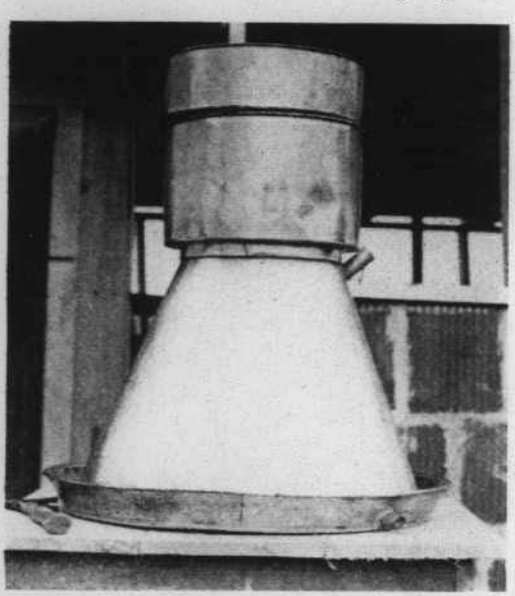
Few laymen have occasion to see the "mechanics" of a large dairy plant, and here we bring you a ringside seat of the pasteuring department of a well known firm (Southern Dairies). Note the many chart-like thermometers which indicate the heat condition of the milk at all times. The three huge pasteuring vats function automatically, but are, nevertheless, under constant supervision. This room was spotlessly clean, well ventilated and well drained. (Photo by RSA).

A typical pasteurizing vat with the necessary controls is shown above. These vats vary in size from 30 to 500 gallons.

There was no "staging" of this picture. The milk bottle had been setting on a customer's lawn for two hours when this picture was made by Mr. Lear. It illustrates splendidly what too-often happens to the milk bottles between the time the milkman delivers it and the housewife takes it indoors. The ants crawling over the bottle and particularly the bottle-lip are only a few insects which seek its cool surface. Particularly flies, the greatest disease carriers of all, crawl over the bottle, dogs take a smell or two, and cats take a few laps. The bottle is then carried inside by the housewife who pours good milk for the babies—over a highly insanitary bottle lip.

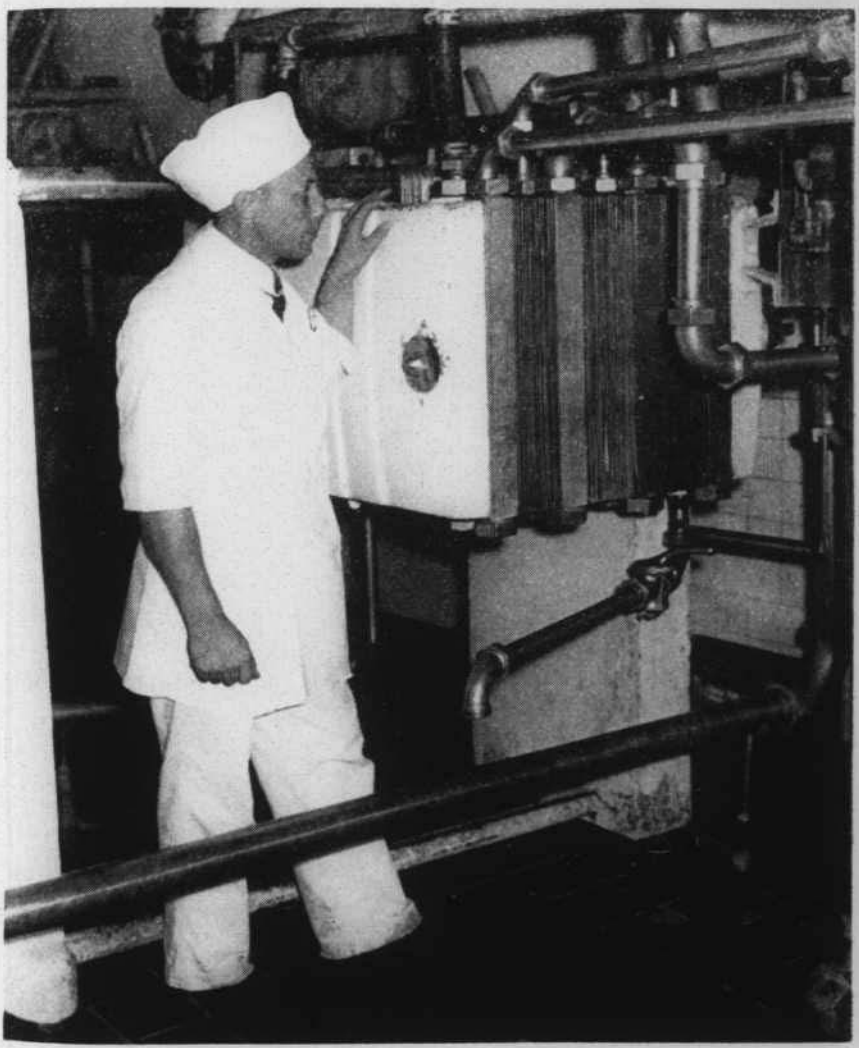
In the previous picture we showed an "unhooded" bottle of milk covered with ants. . . . The above picture, however, is shown to illustrate the protection hoods afford milk bottles. . . . Note that the bottles are machine capped. . . . And even though a bottle is subjected to the passing insects, pets and other inquisitive bits of nature, the hood at least protects the lip of the bottle over which the milk is poured. Picture by RSA was made in Southern Dairies plant.

Fundamentally these vats are nothing more than large double boilers with mechanical agitators. The milk is held in the inside boiler which is heated to the proper temperature by a water and steam mixture in the jacket. **Much care is exercised to insure the proper pasteurization of milk because pasteurization is the most important safeguard applied to milk.** The covers on pasteurization vats are specially constructed so that liquid material on top of the vat cannot fall inside when the lid is being opened. Three thermometers are installed with each vat. One is used to determine the temperature of the milk. Another called the space thermometer is used to make certain that the foam and air over the milk in the vat is heated to at least 5 degrees higher than the temperature of the milk. This insures pasteurization of the foam and any milk that may be splashed under the lid during the filling of the vat. The third, a recording thermometer, gives a written record of how the milk is treated while in the pasteurizating vat. The data on the receiving chart are supplemented by the plant operator who records the date, amount and grade of product, thermometer readings, unusual occurrences and his signature. Additional safeguards are specially constructed inlet and outlet valves made for pasteurizing vats which closely control the flow of milk. The inlet valves prevent the seepage of raw milk from the supply line into the vat at the wrong time. The outlet valves retain all of the milk in the vat until it is properly pasteurized. Also, during construction care is taken to prevent pockets where milk may be inadvertently held so that it cannot be pasteurized.



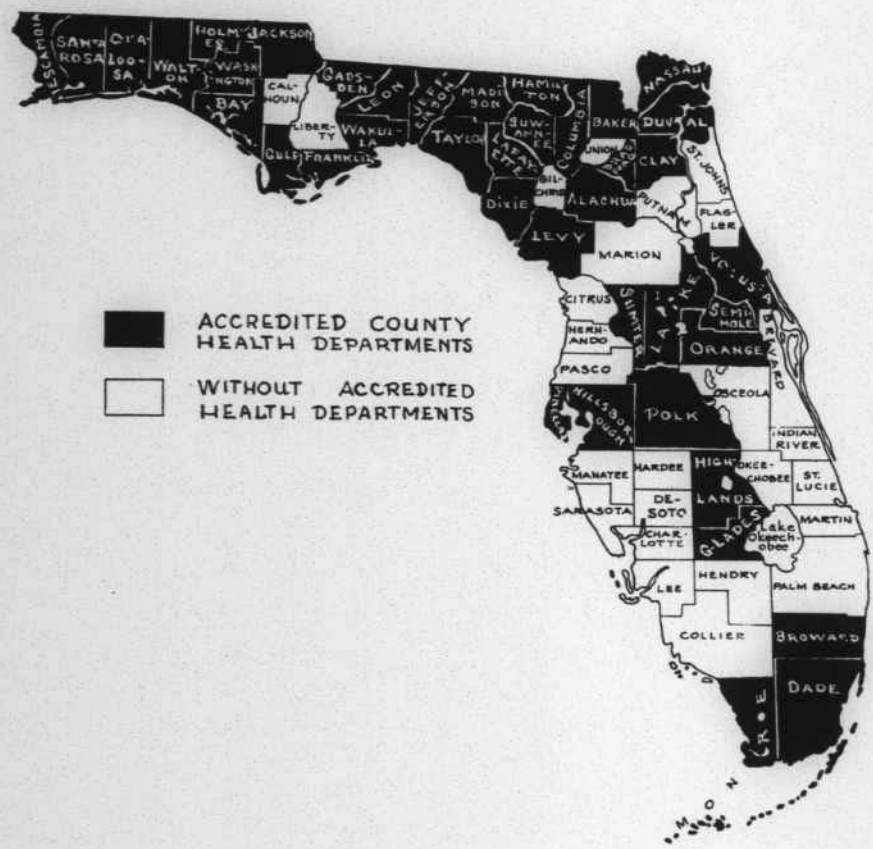
Here are two splendid "before and after" pictures of how milk is cooled in dairy plants. The picture shows a home-made, or "old fashioned" contraption, which was filled with ice over which the warm milk was poured for cooling. The whole thing is "wrong." It allows too much exposure of milk to air and handling, and is labelled "generally insanitary." (Photo by Lear).

Immediately after the milk is pasteurized it is cooled and kept cold. This is important from the standpoint of keeping quality as well as public health. Everyone knows that milk must be kept cold if it is to stay sweet. But **everyone does not** know that milk must be kept at 50 degrees Fahrenheit or less for the best results. Low temperature prevents the rapid multiplication



The picture above made at the Foremost Dairies, shows the modern and accepted sanitary way milk is cooled in a large, sanitary plant. The milk comes in contact with neither hands nor the air . . . It goes in warm, quickly comes out at the properly cool temperature. (Photo by RSA).

STATE OF FLORIDA



of most bacteria and since the total number of organisms must be considered it is essential that milk be kept cold at all times.

The milk is carried through sanitary piping to the cooler and leaves it in the same manner equally well protected on its way to the bottle filler. In the old days milk bottles were capped by hand. Hand capping is frowned upon and prohibited today because it is an excellent means of contaminating milk especially if the capper is a person with careless personal habits. Picture on page 127 illustrates a modern up to date machine for filling, capping and hooding a milk bottle. The machine is ingenious and almost

human because the three operations are accomplished by merely pushing a button. The last act, that is hooding, is rapidly gaining favorable acceptance by discerning consumers. People realize that an unprotected milk bottle lip is exposed to flies, dust, dogs and cats. It is not an unusual sight to see a cat lapping up the milk which has seeped past the milk cap on a hot morning. In fact, it is a very common sight.

After the milk is bottled it is either stored in a large room called a cooler where the temperature is maintained at about 40 degrees Fahrenheit or it is placed directly on the delivery truck. A typical milk delivery truck is built for the maximum convenience of delivery and protection of the milk. It protects the milk from the sun and saves the ice which is used to keep the milk cold during delivery. **It is while the milk is in the delivery truck that milk samples may again be taken.** Collectors ice the samples and take them to a laboratory for examination. This examination is made primarily to protect the health of the general public. It also assists the sanitarian in his efforts to help the dairyman who is honestly trying to improve his product. In addition these laboratory data point an accusing finger to any unscrupulous person who tries to sell inferior products under a Grade A label. Watered milk, careless handling, poor cooling and dirty equipment are readily detected in the laboratory.

QUESTIONS FREQUENTLY ASKED

1. What is homogenized milk?

This is milk which has been forced under great pressure through a small aperature by means of a pump. This process decreases the larger sizes of fat globules which occur naturally in milk, into a small uniform size and prevents creaming. The small fat globules in homogenized milk do not rise and form the cream layer which is seen normally. Even though it is not seen, there should be just as much cream in homogenized milk as there is in unhomogenized milk.

2. To whom can I complain about unsatisfactory milk?

Go to your local health department and tell the health officer why you are dissatisfied with the milk. Also, tell the dairyman.

3. Why won't pasteurized milk clabber like raw milk?

This is not to be expected because pasteurization kills most of the common souring type of organisms.

4. Is it possible to tell how much butterfat is in milk by looking at the cream layer in the bottle?

No—many little tricks can be used to apparently increase the cream layer.

5. Why does milk go bad so quickly in a home?

The housewife permits the milk to get warm, which it does quickly when out of the refrigerator. After getting warm it cools very solwly when replaced in the refrigerator.

6. Why does the butterfat in milk vary in color?

The color of butterfat is greatly influenced by the breed of cow and the feed which she consumes. Since these two factors vary the color of the butterfat will change.

7. How can I tell good milk?

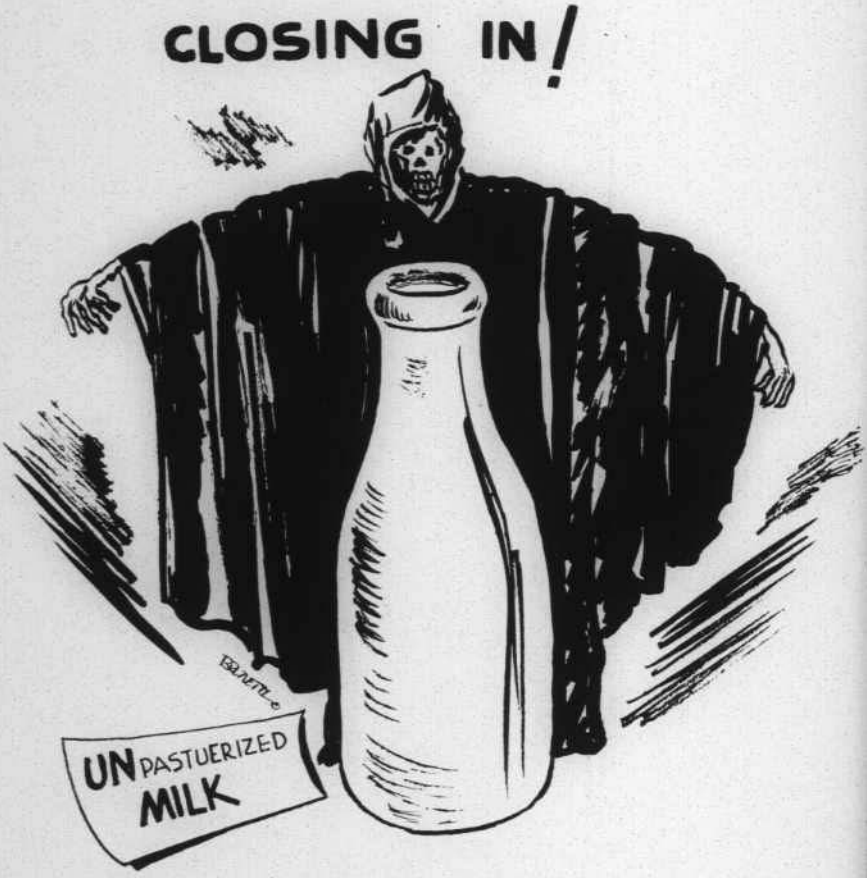
By looking at the milk cap label. Grade A **pasteurized** is the best and safest.

8. What causes feathering in coffee when milk or cream is added?

This slightly curdled appearance may be due to old or sour milk. However, it also occurs with strictly fresh products and is due to the instability of the milk proteins in coffee which may be too strong.

9. What is cream **plug** due to?

The cream plug on a bottle of milk frequently is due to excessive agitation of the milk which causes partial churning of the fat.



The editor believes that a caption to this cartoon by Brunetti would be an anti-climax. The story is obvious and exactly what we mean to portray. "Always—whenever possible drink pasteurized milk."

Florida HEALTH NOTES

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FLORIDA HEALTH OFFICER'S ISSUE

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Dade	Miami
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
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Florida HEALTH NOTES

ESTABLISHED 1890

FLORIDA'S PUBLIC HEALTH PROBLEMS AND WHAT IS NEEDED TO COMBAT THEM

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Florida's Public Health Problems and What Is Needed to Combat Them

By **WILSON T. SOWDER, M. D.,** *State Health Officer*

Most of the issues of Florida Health Notes are devoted to special activities of the Florida State Board of Health and its affiliated county health units. However, in this issue an attempt will be made to summarize our main problems and to indicate the steps that need to be taken to remedy them.

County Health Departments:

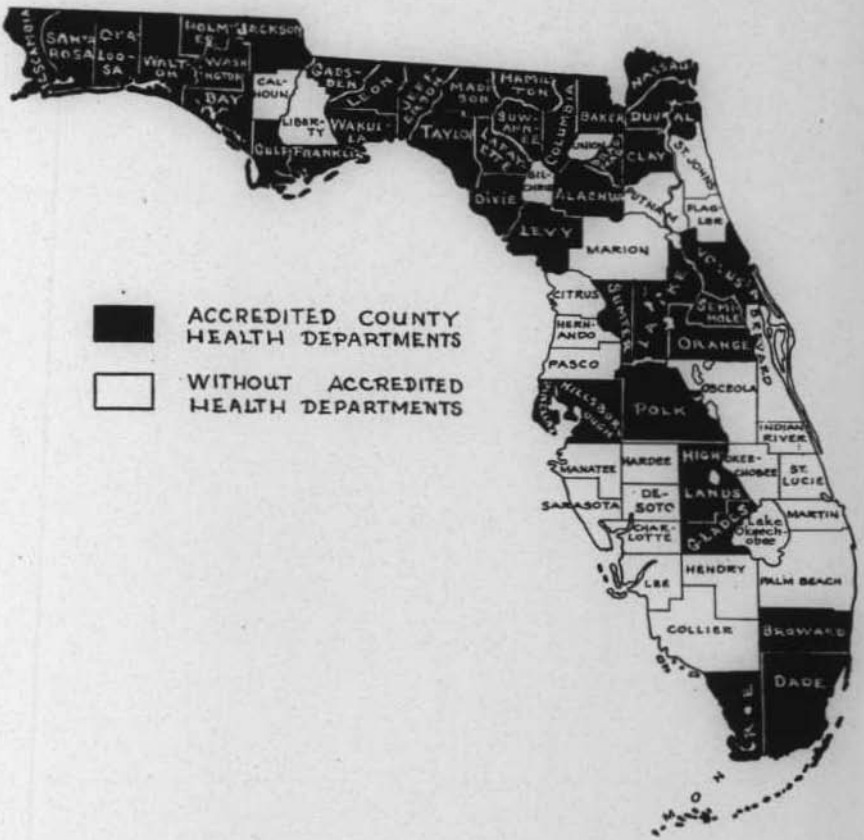
(1) The first and most essential need in combatting our health problems is the completion of an efficient organization covering the entire state. This involves a full-time health department in every county in the state. At the present time only 41 counties have such full-time health departments accredited by the State Board of Health. A great deal of interest is being shown however, by the officials in most of the other counties. Some of these have already appropriated funds for a health department or plan to do so on October 1, of this year. While the State Board of Health has sufficient funds to match those of some of the counties which wish to have health departments it does not have enough to match all of them. The next legislature will therefore be asked for sufficient funds to complete the organization of health units throughout the State.

Housing:

(2) There is a pressing need for better housing for not only the central offices but also for most of the county health departments. Decent offices, laboratory and clinic space are necessary for the organization not only to do its work properly but to maintain the self respect of its employees and to stimulate the respect of others. The central offices, the central laboratory, and most of the branch laboratories are sadly overcrowded. There is not even sufficient space in which to file birth and death certificates in a safe manner—which is required by law. **An entirely new building is needed to house the central offices and central laboratory of the State Board of Health.**

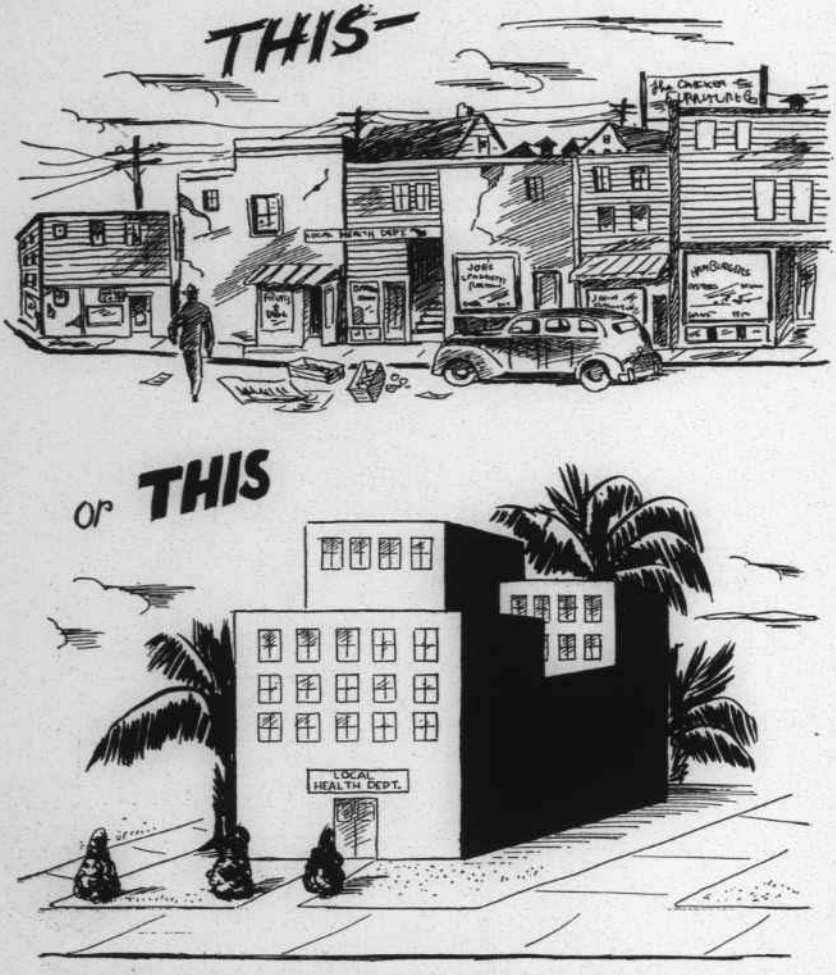
The provision of suitable quarters for offices and clinics for county health departments has always been considered a local responsibility—but it is an important need for the health program as a whole and should not be neglected.

STATE OF FLORIDA



Every effort is being made to urge upon the citizens of the State the importance of planning and providing as soon as possible for more adequate quarters for health department activities. There is pending in Congress a Hospital Construction Act (S-191)* which, if it passes, will furnish material financial assistance—up to about 60 percent—for the construction of not only hospitals, but health centers as well. It is important, however, that the people of Florida be prepared to do this job without help if it is necessary.

*Bill S-191 has been passed since this was written.



The above drawing sums up the story of Florida's public health center buildings. Of the 41 health departments in the State it would be difficult to give as many as 30 a "passable" rating. Bill S-191 now before Congress would allow 59 percent of building costs for new buildings. But the decision to take advantage of this financial aid by adding the remaining 41 percent rests entirely with the local communities—"Shall it be this—or this?" (Cartoon by Brunetti).

Cancer:*

(3) If a new and strange disease suddenly appeared in Florida, and in the course of a year, killed more than two thousand people, a universal cry would go up all over the State for help. No stone would be left unturned, no expense spared, and people would give generously of their time and money because of the horror of seeing their friends and loved ones

*The term "cancer" is used in the lay sense to mean any and all of the malignant tumors.)

struck down by something new and terrifying, something beyond their comprehension. Witness for example, the furor caused by the recent outbreak of poliomyelitis, a disease which is imperfectly understood and which has caused only about a dozen deaths in the state, and permanent crippling effects in a few dozen others. However, we have with us an old and familiar disease—a disease described many hundreds of years ago—that has been killing people in Florida in increasing numbers yearly, causing more than two thousand deaths annually.

Cancer and other malignant tumors are the second cause of death in Florida, being lead only by heart disease. Below are given the actual number of deaths from cancer annually for a ten-year period:

Number of Deaths—Cancer—1936-1945

1936—1,458
1937—1,622
1938—1,551
1939—1,728
1940—1,829
1941—2,002
1942—1,955
1943—2,064
1944—2,219
1945—2,302

The figures are shocking and anyone has a right to dread for himself, his family and friends, this indiscriminate killer—cancer. Such a picture is not a pleasant one—it is a picture of suffering and death. To really control the disease, cancer, we must not only apply our present knowledge fully but we must learn its cause and from that develop better and more efficient cures. Finding the cause means research, and by means of such research much has already been learned about the various types of cancer, the mode of growth and the varying degrees of malignancy. Of great importance is the fact that in its very beginning, cancer is an entirely local disease so that its early discovery in itself will do a great deal to control cancer. Research has given us both x-ray and radium, two powerful agents which combined with surgery gives a good prospect of cure in a large proportion of cases.

How are we going to get persons suffering from cancer treated; and treated early enough to make the known methods of cure effective? Can anything effective be done toward the control of cancer, and to decrease the number of deaths from this disease? The answer to this is definitely **yes.**

An attack on cancer must be three-fold—and must consist of public education, diagnostic facilities and treatment facilities. Since one of the main problems in the prevention of death from cancer is early recognition of the disease the public must be educated to be suspicious of signs and symptoms that might be cancer. Clinics must be set up which are properly equipped and which are staffed by competent specialists who can determine if cancer is present. Last of all, facilities must be made available for the treatment of persons found to have the disease. If the patient is indigent treatment would be at public expense, otherwise he would be treated by his own physician or referred to such other treatment facilities as seemed best for the individual.

An appropriation will be sought at the next legislature for such a program and it will carry with it not only the endorsement of the State Board of Health but also of the Florida Medical Association and the Florida Cancer Society.

The appalling death rate from cancer must be reduced. This indiscriminate killer must be controlled.

Venereal Diseases:

(4) Venereal diseases are among Florida's foremost health problems. According to blood tests taken during the draft by Selective Service on the first two million men Florida ranked third highest among the states for whites and highest for Negroes. The tests showed about five percent of white men to have the disease and about forty percent of the Negroes. (See Charts I and II. Also during the year 1943, 30,000 new cases of syphilis were reported. In 1945 this number dropped to 16,'00 but we feel that the problem is far from solved and without a continuous and unremitting effort over a long period of time the disease will again reach its former prevalence. The venereal disease control program in the state is fairly adequately financed at present but mostly from federal funds. During the present fiscal year we are receiving from the federal government a total of about $600,000 for this purpose as against $88,000 of state funds.

Should federal assistance for this program not continue it should certainly be carried on at its present level by state and local effort. Most of the cases of syphilis are at present being treated on the Hospital Ship, Ernest Hines Rapid Treatment Center in Jacksonville. During 1945 a total of 12,116 persons were treated in the Rapid Treatment Centers operated by the State Board of Health. Unless the treatment of syphilis changes radically there will ultimately be a need for a building to house a permanent rapid treatment center.

One of the country's two hospital ships to be assigned to State Health Departments by the Army, the Ernest Hinds, is now in commission in the St. Johns River at Jacksonville. All other Rapid Treatment Centers (Pensacola, Wakulla, Duval and Ocala) have been closed and patients are now treated aboard the Ernest Hinds Rapid Treatment Ship. Treatment is confined primarily to penicillin administered every two hours. The average treatment time for syphilis is now NINE DAYS compared to SEVENTY WEEKS of the type treatment which was considered "modern" only 18 months ago. Ship has patient capacity of about 450 beds and 12,000 patients are expected to be treated annually. Its personnel numbers about 100 and includes three medical doctors and 15 nurses. (Photo by RSA).

Early in April the Florida State Board of Health began negotiations for a hospital shop to be used as a rapid treatment center for the early intensive treatment of syphilis. The negotiations were culminated by the arrival of the U. S. Army Hospital Ship "Ernest Hinds," to the port of Jacksonville on May 25, 1946. The ship was officially decommissioned and released to the State Board of Health on July 1.

This hospital ship has a rated capacity of 650 beds. The Florida State Board of Health is utilizing about 450 of these beds for venereal disease patients. The remainder of the space will be used by the staff, which includes a maintenance ship's crew, physicians, nurses, clinic aides and miscellaneous labor.

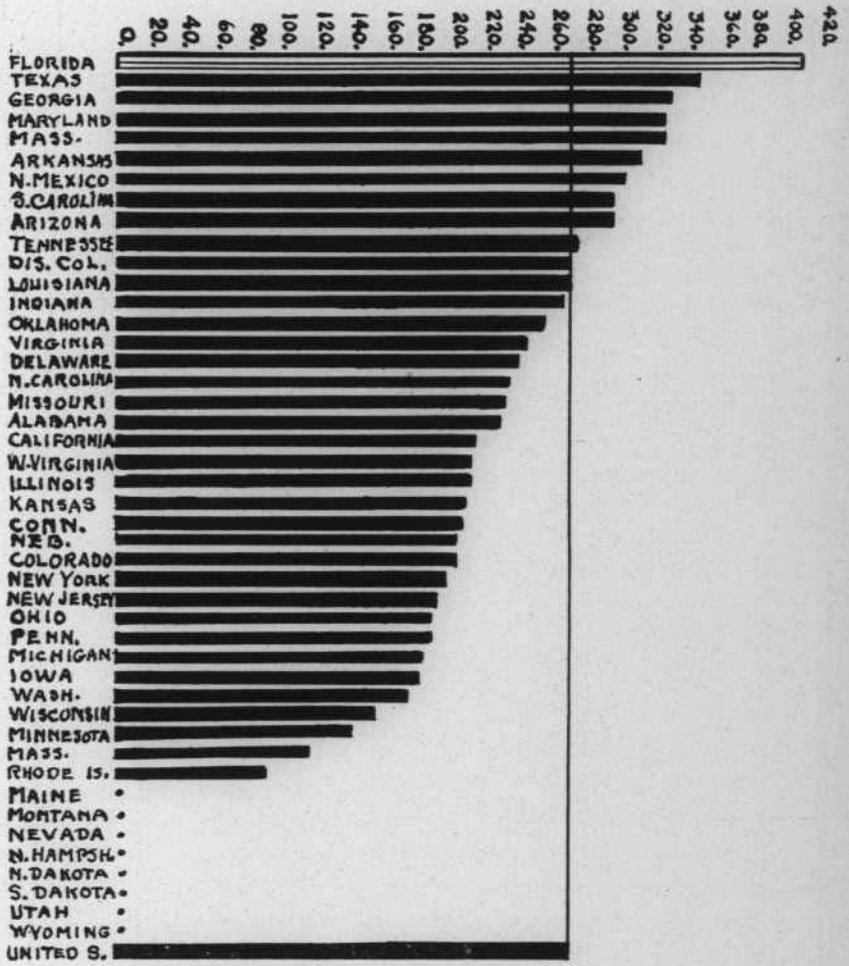
Male and female, white and colored wards, and also private rooms are available.

To effectively control syphilis such hospitalization is necessary. The disease cannot be treated by modern methods or in a clinic or office—except in special cases. If this facility is utilized to its maximum capacity, some twelve to fifteen thousand syphilitics can be treated every year. The treatment of such a large number of patients will certainly lower the attack rate of syphilis in Florida and will materially reduce the number of late complications of syphilis such as heart and mental diseases. Facilities will be available on the ship for treatment of early syphilis of

(Continued on Page 143)

GRAPH 1. SYPHILIS RATES PER 1,000 WHITE MEN AGED 21-35, UNITED STATES BASED ON 1,895,778 SELETEE SEROLOGIC REPORTS, 44 STATES AND DISTRICT OF COLUMBIA, THROUGH AUGUST, 1941.

GRAPH 2. SYPHILLIS RATES PER 1,000 NEGRO MEN AGED 21-35, UNITED STATES BASED ON 1,895,778 SELECTEE SEROLOGIC REPORTS, 44 STATES AND DISTRICT OF COLUMBIA—THROUGH AUGUST, 1941.



the brain. There is no doubt that a vigorous venereal disease control program pays dividends not only in lives saved and health preserved but in actual public funds that would otherwise have to be spent for the care of the late results of this disease.

Typhus Fever:

(5) Typhus fever is becoming an increasingly common disease in Florida. During the ten-year period from 1935-1944 a total of 1,858 cases and 150 deaths were reported. It has become a matter of such great concern that the State Board of Health has succeeded in getting the assistance of the Rockefeller Foundation in investigating the extent of the problem and in determining if better methods of control might be found. Preliminary investigations have already shown that **four** times as many cases of the disease occur as are officially recorded so that our concern has increased accordingly. Meantime since the disease is known to be spread by rat fleas the attack is centered in a rat control program which is very effective when vigorously pushed. This program consists mainly in the ratproofing of buildings in the business district of cities and towns. The work is done by employees of the State Board of Health and County Health Departments with assistance from the U. S. Public Health Service. Most of the services are paid for however, by the business men themselves. The reaction of business men is typified by the following statement made by J. Velma Keen, farm supply store owner in Tallahassee, "Before rat proofing and rat eradication in our store we had four cases of typhus fever. There have been no cases in our store since the work was done in 1944. The financial loss in feeds, seeds and chicks due to rats has not been

The above picture calls for considerable thought. The young man is pointing to a difficult bit of ratproofing around a sewer pipe in the ceiling of a grocery store in Central Florida. Observe closely the discoloration on the ceiling and wall around the pipe. It is known as a rat run and was made by the feet and greasy coats of rats coming and going through the hole in the ceiling which is now covered by "hardware cloth," and completely rat proofed. It has been estimated that most of the rats which frequented this 'run" were typhus infected. Should a customer have been bitten by a flea from one of these infected rats, he would have been in for a long seige of illness. In fact, many cases of typhus were reported from this town. In the past 10 years 1,858 cases have been reported as well as 150 deaths. It is currently estimated however that there are at least four times as many cases of the disease in Florida as are reported to the State Board of Health. (Photo by RSA).

estimated, but the eradication of these rodents has resulted in substantial savings."

An efficient and continuing typhus fever control program can only be carried on where there is a well organized, and well staffed county health department to supervise the work.

Malnutrition:

(6) The State Board of Health has always been concerned with the problem of nutrition in the state. It is doubtful, however, if proper nutrition, as a factor in maintaining health has been given the consideration it deserves until recent years. Physicians connected with the State Board of Health and those in private practice have for years credited hookworm infestation as the major cause of anemia, malaise, and general physical debility often seen among rural children of school age. That such a condition exists and that it is a major problem has been conclusively shown by a group of workers at the University of Florida.

These workers, Abbott, Townsend and Ahmann, demonstrated that anemia is a serious problem among rural children in Florida. In a recent study of 2,205 rural white children, 42.3 per cent were found to have hemoglobin values of less than 11.4 Gm. per 100 cc., indicating a serious health problem. There is evidence that this anemia is not confined to children who are suffering from hookworm disease. Negro children seem to be more subject to anemia than white children in spite of their greater resistance to hookworm infestation. There is some likelihood that mineral deficiencies in the diet, and perhaps in the soil on which the food is grown, may account in some degree for the presence of anemia. It is natural to suspect that iron is one of the deficient minerals, but copper, cobalt, and other minerals, as well as certain vitamins and protein may play a role. Undoubtedly, also, poor food habits play a part and such habits would be particularly amendable to an educational campaign.

Besides the problem of anemia there are findings which suggest other dietary deficiencies, particularly vitamin deficiencies. This is a rather startling observation in a state that prides itself on its sunshine and citrus fruits. Dietary studies have shown, however, that many of our Florida children do not even have citrus fruits included in their diets.

It appears that there is a pressing need for investigations covering the entire nutritional field in Florida. Such investigations are already under way—and are being financed by temporary

(Turn to Page 147)

Malnutrition, anemia and other nutritional deficiencies are such major health problems in Florida that the State Board of Health has established a special investigation service to try to ascertain the various causes of the deficiencies. Although there is known to be a large incidence of hookworm among both school children and adults, there is good evidence that the deficiencies are not confined to persons suffering from hookworm disease. Believing that health, like charity, begins at home, the first step in launching the service was to make a hemoglobin test of all central State Board of Health empoyees, which in itself, revealed some interesting findings. Dr. Walter Wilkins, Director of Nutrition Investigations and Services, is shown in the process of testing Fred B. Ragland, Director, Accounts and Finances. In the bakground is David B. Lee, Director Sanitary Enaineering, and in foreground is Dr. A. V. Hardy, Director of Laboratories. (Photo by RSA).

Here we have two striking contrasts in water supply facilities on Florida school grounds. Above a school yard in Nassua County. Note the "outlawed" pitcher pump. There is no protection from these gadgets in that the top is open enough for almost anything to crawl through. Also, a pitcher pump nearly always has to be primed, and that washes the dust and other foreign gatherings collected around the top into the well. A big goal is to eliminate this type of water supply on school grounds. (Photo by RSA).

grants of funds from the U. S. Children's Bureau, the Milbank Fund, the Nutrition Foundation and the Research Corporation. Such investigations should continue, however, until the problem is solved—and we earnestly hope that this will be possible.

Hookworm:

(7) This is a disease of warm climate, sandy soil and poor sanitary conditions.

Leathers, Keller and McPhaul, in a survey made in 1937-1938 of 29,064 white persons living in rural communities in Florida, found 34.8 percent to be infested with hookworms. In addition, they found the parasite present in 19.9 percent of 4,121 specimens taken from Negroes. There is no reason to believe that a remarkable improvement has occurred since that time.

Florida undoubtedly, has a larger problem due to hookworm than does any other State. On the basis of this and numerous other surveys, it appears that a large proportion have such a heavy infestation as to injure their health—it is certain that many thousands suffer from anemia and debil-

Picture shows the accepted force pump. It is on a Negro school ground in Alachua County. Note the strong fountain flow which is occasioned by virtually no effort on the part of the individual manipulating the pump. Special feature here too is that the water spouts high enough that a child's lips do not touch the outlet, therefore helping to prevent any possible disease transmission. Checking water supplies on school grounds is a responsibility of the local health department. (Photo by RSA).

ity from this cause. Many years ago when it was first discovered that hookworm disease was widespread throughout the South, it was widely publicized as the "Germ of Laziness" and most of the South's ills were traced to it. As a result, many in the South became exceedingly sensitive on the subject. One Florida newspaper suggested that a prominent authority on hookworm be hanged if he came here, because he had written very frankly on the problem of hook worm in Florida. Florida has long since discovered that the remedy lies not in hanging health officers but in improving excreta disposal. Modern sewage disposal systems in cities and towns and well designed septic tanks in suburban and rural areas would eliminate the disease. Sanitary pit privies are of course necessary where running water is not available. The encouragement of construction of such facilities occupies a large part of the effort of every county health department—and our Bureau of Sanitary Engineering is constantly encouraging these efforts and is particularly active in assisting municipalities in improving their sewage disposal plants. Needless to say, a safe water supply and proper sewage disposal are the keys to the control of a large number of gastric intestinal diseases. Typhoid fever, amebic and bacillary dysentery, and the diarrheas of infancy are but a few examples.

Malaria:

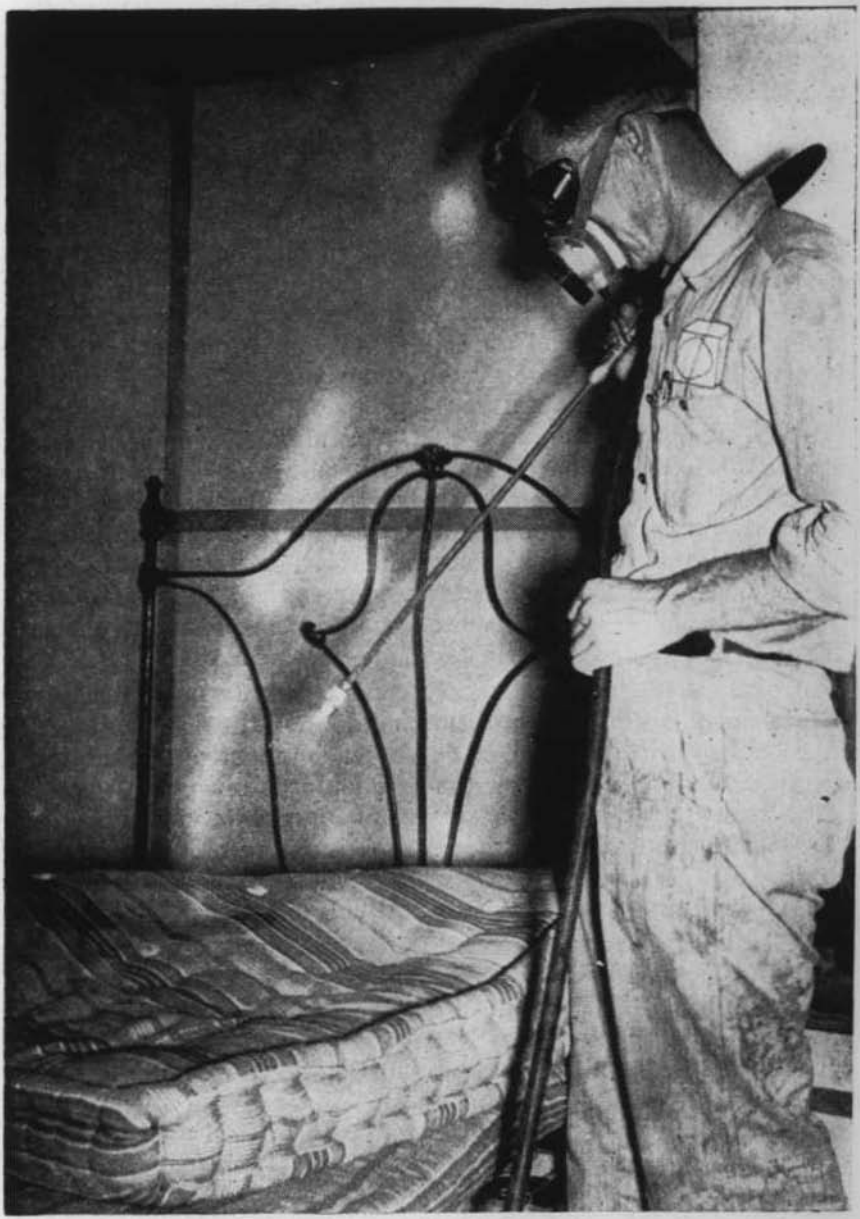
(8) Malaria, under a variety of names, has been a severe scourge to the people of Florida. This debilitating disease has caused misery, poverty, and general economic distress on a scale hardly to be appreciated by the people of today's Florida.

The disease has been most prevalent in the western section of the State and has been characterized in the past by epidemic cycles of approximately seven-year intervals. The last up-swing occurred in the middle thirties. In the cycle of 1929, 470 individuals lost their lives from the disease, and for every death there is estimated to be at least 200 cases.

It is true that the malaria trend has been downward since 1919. The sharpest decline occurred after the last peak in 1937. A cyclic elevation of considerable magnitude was anticipated in 1941. This elevation was slightly significant in an increased malaria parasite rate, but was not apparent in the morbidity or mortality figures.

Why malaria in Florida did not rise to an anticipated peak in 1940 or 1941 has been a much debated question. There is no doubt but what the downward trend of malaria incidence over the years has been due to such measures as popularization of household sprays for adult mosquitoes, more and better screen-

(Turn to Page 150)



In March, 1945, the War Production Board released a limited supply of the DDT insecticide to State Health Departments to be used exclusively for the control of malaria-carrying mosquitoes. Florida's Bureau of Malaria Control immediately began a campaign to spray virtually every house in the ten counties having both the highest death rate from malaria as well as the largest population of malaria-carrying mosquitoes. This year the spraying campaign was extended to cover 26 counties, but on a more concentrated sale. Although the insecticide was released to control malaria-carrying mosquitoes it nevertheless eliminated flies, bed bugs, silver fish and many other insects that make life miserable and living difficult. DDT spraying, however, is not a recommended substitute for proper screening. Here we see one of the Bureau's trained men giving a mattress a "good and badly needed dose" of the famous spray. (Photo by RSA).

ing, use of repellents, agricultural and other drainage, the use of anti-malarial drugs, and other means. The cumulative effort of both anti-mosquito and anti-parasite measures necessarily reduced malaria incidence. Yet it is not likely that any or all of these factors could have forestalled the recrudescence, even if slight, in 1940 or 1941, which was indicated by the cyclical nature of the disease. It is not surprising that the blood parasite records for Florida show not only a break in the downward trend of positive smears in 1939, but actually an increase in 1940 and 1941. In 1942 came the precipitous decline in positive blood smear rate which placed the blood parasite curve on a par with the mortality curve for the subsequent war years. There is therefore evidence that the actual malaria trend in Florida really did start an upswing when expected. The upward trend was broken in late 1941, coincidentally with the country's entry into World War II. It is altogether possible that mass population shifts brought on by the national emergency, most of it in the direction of areas (service camps, war industries, and congested towns) where malaria mosquitoes were under control, dissipated the incipient carrier reservoirs which would otherwise have brought about the expected malaria incidence peak in 1941.

Now (1946), with currently reported malaria occurring preponderantly in returned military personnel, the future of malaria in Florida is in question. It has been demonstrated that the indigenous vector **Anopheles quadrimaculatus mosquito,** is capable of transmitting those exotic strains of **Plasmodia** which these men have contracted in foreign fields. With the remaining population completely non-immune to these strains, a threat is manifest. The next few years will be the critical years.

Realizing the acuteness of the problem the Federal Government has financed a DDT house spraying program in Florida, since March, 1945. The State Board of Health has received a commitment for $267,000.00 for the fiscal year 1946-1947, to be spent on DDT house spraying in the malarious counties of Florida.

In 1941 a Bureau of Malaria Control was established in the State Board of Health in cooperation with the U. S. Public Health Service and the Rockefeller Foundation. Its purpose has been to coordinate all of the various activities pertaining to malaria control. Its functions have been to conduct epidemiological investigations, spleen and blood surveys, entomological surveys, do the over-all planning, and provide the supervisory and technical organizations for all malaria control operations in the State.

The bureau has practically completed, on a state-wide basis, one of the most comprehensive malaria mosquito surveys ever

recorded in the United States.

This information will be valuable in carefully delineating the malaria mosquito population into small sections of each county. With this information available the bureau will be in a position to designate those areas where malaria transmission is likely to occur and also where control work is indicated.

Armed with a sharp control tool like DDT the problem of malaria control will be greatly simplified, provided the necessary funds are made available by the State to supplement the funds of the federal government, otherwise malaria may again reach epidemic proportions in those sections of counties where the malaria mosquito population remains high.

Malaria is a menace to the people of areas where it is prevalent. It is without a rival among the diseases affecting man and it is imperative that our efforts to stamp out the worst scourge of mankind should not be relaxed.

Other Communicable Diseases:

(9.) Florida still has many cases of communicable diseases that are preventable by immunization. Smallpox which is 100 percent preventable and has been so for over a hundred years, still occurs occasionally in the State. Although many people are vaccinated against the disease, less than one-third of the population of the State live in areas where vaccination is legally required. There are no laws requiring the use of other immunization methods capable of reducing cases of diphtheria, whooping cough, tetanus and typhoid to a negligible number. There have been 155 cases of diphtheria so far this year and 9 deaths, all of which could have been prevented. We have the unenviable record of 7 deaths from tetanus so far this year. Whooping cough which can be prevented or at least reduced in severity to the point where it will not cause death, has caused 2 fatalities this year. Lives are too valuable to be wasted through such carelessness.

The Florida State Board of Health distributes free to physicians the materials to save these lives, and all persons—especially children, should avail themselves of the opportunity to be immunized. It is best to start with the young. A child should be immunized for smallpox between the ages of three to twelve months. Injections against whooping cough should be given at from three to six months of age, and against diphtheria at from six to nine months. Tetanus immunization may be given at the same time as diphtheria. Booster doses of these vaccines should be given when the child goes to school and at regular intervals afterwards. Typhoid vaccinations should be given to all

persons living in an area where the water supply is not under the close supervision of the health authorities.

Poliomyelitis is also a considerable health problem in the state as is evident from the outbreak during the current season. Its importance is, however, unduly magnified in comparison with other diseases. This is probably due to two facts. The disease affects children mainly—and we know very little about its control. It is hoped that intensive research programs now under way in many parts of the country will provide us with effective weapons to combat this disease before any future outbreaks occur,

Tuberculosis:

(10.) Tuberculosis still remains the most serious infectious disease in the United States. Available figures in a special mortality study for the United States between the years 1939 and 1941 show that 2,793 individuals died from tuberculosis in Florida during the three year period, or an average of 931 deaths for each year during the three year period. It will also be noted that between the ages of 18 and 40, the most productive age period, tuberculosis is the first cause of death among all diseases. The mortality rate among Negroes is approximately three times as high as among white people. For example, the number of deaths occurring during the three year period among 689,570 white males was 752, but among 253,553 colored males the number of deaths occurring during the three year period was 885. Among white females, out of a population of 692,416, there were 369 deaths, but among colored females there were 789 deaths out of a total population of 261,875.

In evaluating mortality statistics it should be borne in mind that for each death from tuberculosis there are at least nine (9) cases in the population. It can, therefore, be seen that during the three-year period it can be conservatively estimated that there were 25,137 cases, many of which were unknown.

In Florida the administrative responsibility for the diagnosis and the follow-up of all cases of tuberculosis rests with the State Board of Health. Obviously, without the active participation of our affiliated county health departments it would be impossible for us to adequately carry out the tuberculosis control program. Fortunately, through Federal grants-in-aid we have been able to secure adequate funds for a greatly expanded tuberculosis control program, which is being placed into operation as personnel and equipment can be obtained, and which to a large extent will be operated on a county level.

The purpose of the program is three-fold:

1. To render direct service to the people examined and studied, as well as to their families and the community in which they reside.

2. Research through the acquisition of data concerning the extent of the problem, and the classification of this data.

3. Education of the public in matters pertaining to tuberculosis control.

A knowledge of the extent and scope of the disease problem in a community is essential to the health officer in preparing an adequate program.

The program outlined by our Bureau of Tuberculosis Control is:

1. To establish adequate registers to enable us to determine the extent of the problem on a county level.

2. Active and progressive case-finding by all known methods. This includes mass surveys, using the small film x-ray technique on well population groups in an effort to find tuberculosis before symptoms develop, thereby giving a much better chance for control of the disease.

Segregation and treatment of all patients having tuberculosis in the State of Florida. This includes great expansion of existing sanitorium facilities.

4. The domicilary supervision by local health department of families where tuberculosis is or has been present.

5. Rehabilitation of patients by the Vocational Rehabilitation Service of the State Department of Education.

6. Follow-up of all cases and contacts by the Bureau of Tuberculosis Control.

7. Financial assistance to needy families by the Department of Welfare in a manner free from the stigma of pauperism.

It is, therefore, the plan of our Bureau of Tuberculosis Control to establish 15 diagnostic and treatment clinics in the various centers of population which will serve approximately 80% of the people of the state. Trained tuberculosis clinicians will hold diagnostic and treatment clinics in these localities on regular scheduled days. In the smaller counties where permanent diagnostic equipment is not available, itinerant clinics will be held at periodic intervals, and emphasis will be placed on the examination of contacts of known cases of tuberculosis, and patients who may be referred by their physician because of symptoms referrable to the chest as well as the follow-up of known cases of tuberculosis.

It is the intention of the State Board of Health to develop a continuity of medical service from case-finding through treat-

An important person in the local health department is the public health nurse. (There is a current budget for 144 nurses, but the American Public Health Association estimates that Florida should have a minimum of 324 public health nurses). Here we find a Dade County nurse checking with a young "potential" tuberculosis patient whose father's disease was discovered during a recent survey made by the mobile x-ray unit. Also, the mother and two small children showed suspicious symptoms. The entire family reports regularly to a private physician for x-rays under the supervision of the local health department. (Photo by RSA).

ment at the Sanatorium, and follow-up of both the patient and the family. Tuberculosis will be approached on a family and a community basis, but the patient will be treated as an individual.

The State Tuberculosis Sanatorium, which has supervision of hospitalization of most of the patients of the state, is not under the jurisdiction of the Florida State Board of Health, but cooperation between the State Tuberculosis Board, the Superintendent of the State Tuberculosis Sanatorium and our Bureau of Tuberculosis Control has been splendid, and in reality represents a continuity of service. Cases are found by the State Board of Health, referred to the State Tuberculosis Sanatorium for treatment, and when they are discharged from the State Sanatorium they are referred back to us for follow-up and supervision.

As mentioned previously, adequate funds are available at the present time for inaugurating a program of this character. But, obviously, as the program develops and more follow-up work is needed on a local level, more funds will be needed by the county health departments for this purpose, and it is felt that additional funds will be needed by our Bureau of Tuberculosis Control as the program develops.

Industrial Hygiene:

(11) The Florida Legislature, at its last session, amended the Workmen's Compensation Act in order to include occupational diseases. One of the Sections of this act directed the Workmen's Compensation Division of the Florida Industrial Commission, in cooperation with the Florida State Board of Health, to make a study of occupational diseases and of ways and means for their control and prevention. An Industrial Hygiene survey of industrial establishments in Florida was undertaken cooperatively by the Industrial Commission and the State Board of Health during the first six months of this year with the technical assistance of the U. S. Public Health Service. Sufficient information was collected to determine the extent of occupationl disease hazards in the state.

Why was such a survey necessary? War time successes proved the effectiveness of industrial hygiene control in reducing illness and death to a phenomenally low level in such dangerous industries as munitions plants. No more than ten percent of all American industrial workers, however, received the protective benefits of industrial health measures in 1945. The health of the industrial worker is a matter of concern not only to industry, but to the community at large. The elements of a good industrial health program aim to achieve and maintain three goals:

1. A safe and healthful working environment
2. A healthful community environment
3. Healthy, well adjusted men and women engaged in industrial production.

To carry on a permanent program which will offer protection to the industrial workers of Florida will require a small state appropriation to supplement federal funds allotted for this purpose.

It is estimated that the occurrence of as few as a half a dozen deaths from preventable disease hazards will cost as much as the operation of an Industrial Hygiene program for an entire year—and it is anticipated that such a program will give far greater returns in lives saved and in fewer days lost from work and from medical bills saved.

Other Problems in Environmental Sanitation:

(12) A major responsibility of the State Board of Health—supervision and control of water supplies and sewerage systems—has already been mentioned in connection with hookworm disease. The fact that there are some 108 public water supply systems in the state emphasize the importance of this task. Furthermore, although there are only 23 sewage treatment systems in the state but there are 41 cities and towns in need of such systems. The need for these improvements must be brought constantly to the attention of the proper municipal officials and to the general public itself. Assistance and advice must be given in planning such improvements, and, finally plans for such must be reviewed and approved.

Other essential activities in the field of sanitation involve inspection of food producing and food handling establishments; some supervsion of milk production, handling and distribution to insure its freedom from disease producing organisms; and supervision of shellfish production;

There is a growing need for public health engineering services in the state in connection with the prevention of the pollution of our waters by sewage and industrial waste. Such pollution of our streams, lakes and our tidal and underground waters naturally affects adversely their usefulness for recreational purposes besides being a menace to health. In a single instance the pollution of bay water by sewage and industrial wastes prevents the development of a million dollar shellfish industry. The rapid expansion of the citrus canning industry has created a growing problem in wastes treatment and disposal. The wastes from slaughter houses presents problems. Should the oil industry develop in the state as some anticipate this will add materially to the problem. While the State Board of Health has no wish

to insist on uneconomic waste treatment systems it believes that by conscientious study and effort it can discharge its legal responsibilities in these matters to the satisfaction of all concerned. Additional personnel however are needed before many of these duties, which are required by law, can even be undertaken.

Maternal and Child Health:

(13) Maternal mortality rates are much more understandable if they are considered as the cost in mothers' lives of producing 1,000 live births. It is gratifying to see the cost everywhere is being lowered and that this process went on even during our war years. That Florida is lagging behind the Nation as a whole is illustrated by the fact that in 1944 we had 3.3 maternal deaths per 1000 live births, as against a national average of 2.3 deaths. That much has been done in Florida is shown by the table below which shows a steady drop in the maternal death rate from 6.4 in 1940. This shows that mothers ran only half the risk of dying in childbirth in 1944 as in 1940. It further shows that improvement in Florida has been much more rapid than in the U. S. as a whole.

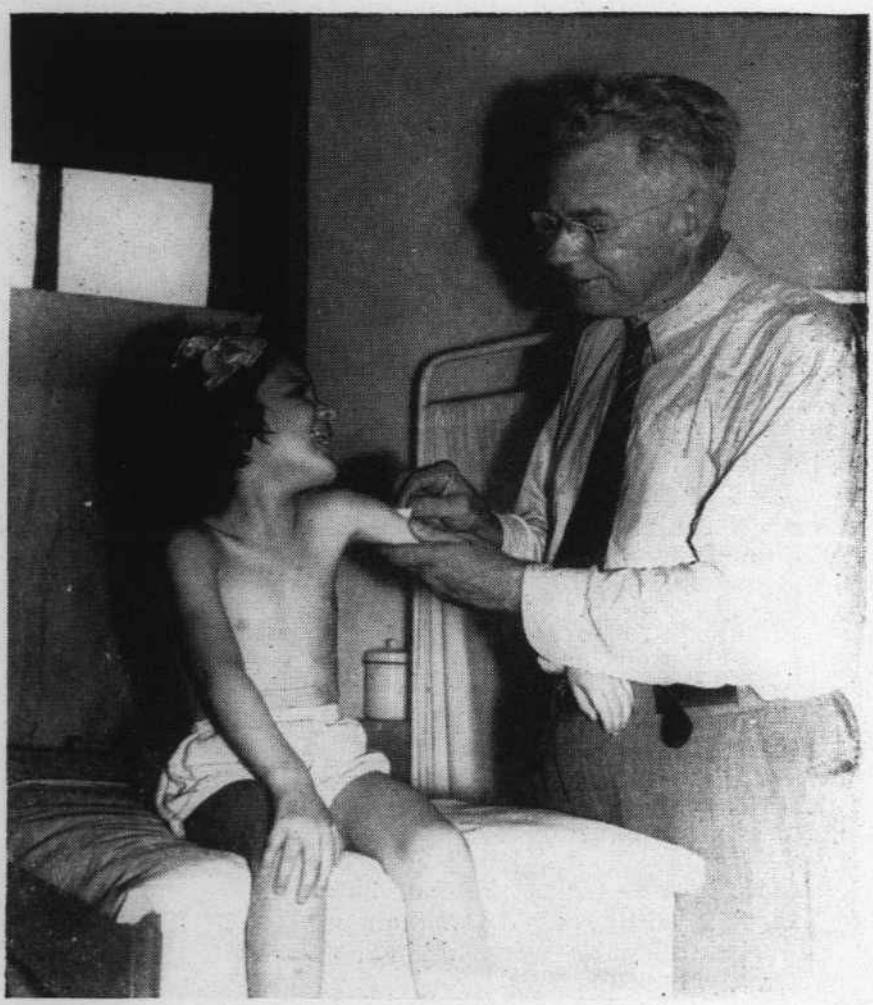
MATERNAL MORTALITY RATE PER 1000 live Births in Florida and U. S.

1940-44	Fla.	U.S.
1940	6.5	3.8
1941	6.2	3.2
1942	4.1	2.6
1943	3.7	2.5
1944	3.3	2.3

There is still much to be done however. For example, if in 1943 Florida had lost only 1.4 mothers per 1000 live births, as was the case in Minnesota—we would have had only 69 deaths instead of 173, a saving of **104 lives.**

Although the loss of life due to maternal mortality is not high in numbers, the results of this unnecessary wastage of lives of young women are very important as it is a waste of potential lives and many times a disruption of a family unit with serious results to the children remaining. The fact that "puerperal causes" are the fifth leading cause of all deaths in women aged fifteen to twenty-four years should be a matter of great concern to the people of Florida.

Our infant mortality rate is also much too high. This has not been lowered in the same proportion as the maternal mortality during the last ten years. Prematurity is given as the cause of 33.9 percent of all the deaths under one year of age. In 1943 and 1944 prematurity, which can affect only infants, was the eighth



Immunization of all Florida children against preventable diseases such as diphtheria, whooping cough, smallpox, is an important function of all local health departments. However, more intensive public education is necessary if every child is to receive the protection he deserves. Best illustration is that 155 cases of diphtheria alone have been reported this year, with NINE deaths, ALL WERE PREVENTABLE. The above picture is important because it shows an excellent "comradeship" between the local health doctor and small patient. Too many chidren are frightened, sometimes by their parents, with the threat of vaccination. The understanding physician is Dr. Geo. Dame, onetime local health officer for Nassau County, now director of Local Health Services. (Photo by RSA).

in the list of causes of all deaths at all ages. Many premature infants can be saved by good nursing care and expert medical attention.

Infants die from other causes more readily if they are ill-nourished and poorly cared for. Although prematurity alone,

with its toll of 755 deaths in 1944, is the greatest cause of death in infants under a year old, there are other killers that might be foiled with the application of the medical knowledge we now have. Whooping cough, diphtheria, tetanus, tuberculosis, congenital syphilis, measles and rickets are all classified as diseases that can be prevented caused the deaths of some infants in Florida in 1944. There were 231 deaths from pneumonia, 60 deaths from influenza, and 179 deaths from birth injuries. Diarrhea and dysentery, the great infant killers of a generation ago, claimed 142 infants under a year old.

When the cost in mothers' lives of producing these infants is so high, we can scarcely afford to throw away some of them through lack of care or preventable disease.

In addition to the mothers and babies who die, more individuals recover but are handicapped by accidents during delivery and by preventable illness.

Because of the shortage of physicians and hospitals in the State, 18 percent of all births are attended by midwives. Sixty-one percent of all Negro births and 3 percent of all white births are attended by midwives. The State Board of Health is charged with the responsibility of licensing and supervising these midwives. With the limited facilities that we have, it has been impossible to do this as well as it should be done.

Clinics carried on by our affiliated County Health Departments give prenatal supervision to patients of the midwives and give instruction in the proper prenatal care and infant care to everyone. Immunizations against smallpox, diphtheria and whooping cough are offered free of charge in all the clinics. These services are not given on the basis of need but are a part of a general program of education of the public in maternal and infant hygiene.

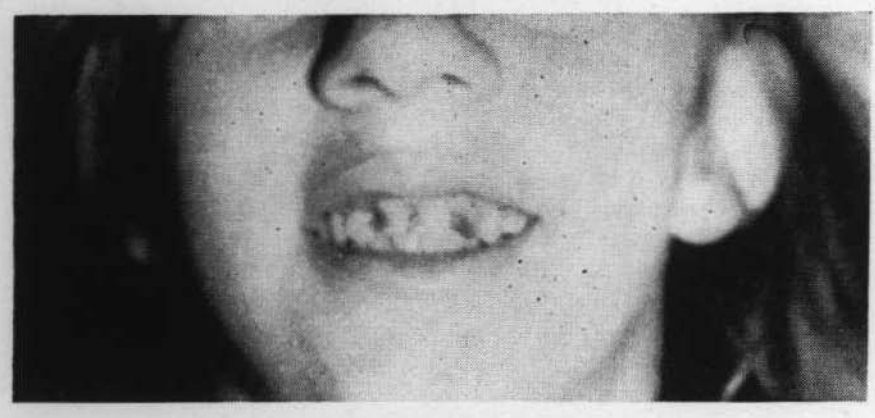
A better knowledge and application of the principles of sanitation, proper maternal and infant care, and an immunization program together with the other advances in medical knowledge and the provision of better facilities for the care of mothers and babies will go far toward the saving of many lives in this important group.

Dental Health:

(14) Four major factors contribute to poor dental health in Florida: 1, lack of dental health education; 2, inadequate dental facilities; 3, lack of ability to pay for dental services by a large number of persons; 4, inadequate provision of dental service for dental indigents.

The above statement is supported by the results of surveys conducted by the State Board of Health indicating that:

a. Between 80 and 90 per cent of the elementary school population are victims of dental disease.
b. Only approximately 20 percent of the elementary school population are definitely able to afford dental service compared to 35 percent definitely unable to pay. Forty-five (45) percent were classed doubtful in their ability to pay.
c. Ten of Florida's 67 counties have no dentists or dental facilities whatsoever; thirteen of them have only one dentist each; the majority of the dentists are concentrated in the cities—leaving large rural areas to overcome the ill effects of dental disease as best they can.



This youngster with such very bad teeth lives in a county where there are many dentists, and although the bad condition has been corrected there is very little case history as to WHY the teeth should have been in such a condition in eleven short years. Patient was discovered when the State's dentomobile, a completely equipped dental office on wheels, checked the children's teeth in an entire school. Four major factors are believed to contribute to poor dental health in Florida: lack of dental health education, inadequate dental facilities, lack of ability to pay for dental services by a large number of persons and inadequate provision of dental service for dental indigents. (Photo by RSA).

Florida's elementary school enrollment (1943-44 record) was 237,657. Naturally it is much larger now, but by taking that same figure and using our survey measuring rod, at least 200,000 of them were afflicted with dental disease and of that number only approximately 40,000 were able, through their own resources, to afford the dental care necessary to correct or alleviate the situation.

The State Board of Health has for years carried on a dental health program but this has never at any time even approached adequacy. More and more of the larger county health departments are, however, including a full-time or part-time dentist

in their budgets, and the State Board of Health is preparing to put a second mobile dental unit in the field. It is hoped that within a few years we will be able to have the entire state covered so that at least the worst cases of dental defects among school children can be corrected. Not the least of the benefits of a dental health program is the education of parents and children relative to the care and preservation of their teeth. Good teeth are of course necessary for good general health.

Laboratories:

The above picture shows only a small corner of the large, overcrowded, understaffed central laboratory of the State Board of Health. However, the five girls and their supervisor (representing one division) complete nearly 2,000 serologic tests DAILY. During the past five years more than 5,000,000 tests for various diseases were performed in the State's laboratories, representing a service valued in dollars and cents at commercial rates at $5,000,000 ANNUALLY. However, the total budget for the central and branch laboratories is only about $275,000. Although the monetary value is considerable it is small compared with its protection to Florida's public health. A pregnant woman found to have a positive blood test is treated for an unsuspected case of syphilis, and a healthy rather than a diseased infant is born. A water supply is examined and found to be unsatisfactory—and an epidemic is averted. (Photo by RSA).

(15) The furnishing of dependable and complete laboratory services are essential to any health program. The type of service furnished is of vital concern to every person engaged in public health or in the private practice of medicine in the state. In fact it is of vital concern to every citizen in the state because very few residents of the state escape having a test done at a state laboratory at one time or another. The results of these

tests, and reliability of the results may mean the difference between life and death to the individual, and as a minimum they mean the difference in getting proper treatment or not. Our laboratories in recent years have not had sufficient personnel, or sufficient well trained personnel, or sufficient working space.

The major objectives of our Laboratories are to aid physicians in the diagnosis and control of preventable diseases, to cooperate with hospital and private medical laboratories, and to assist State and County attorneys with cases of a medico-legal nature.

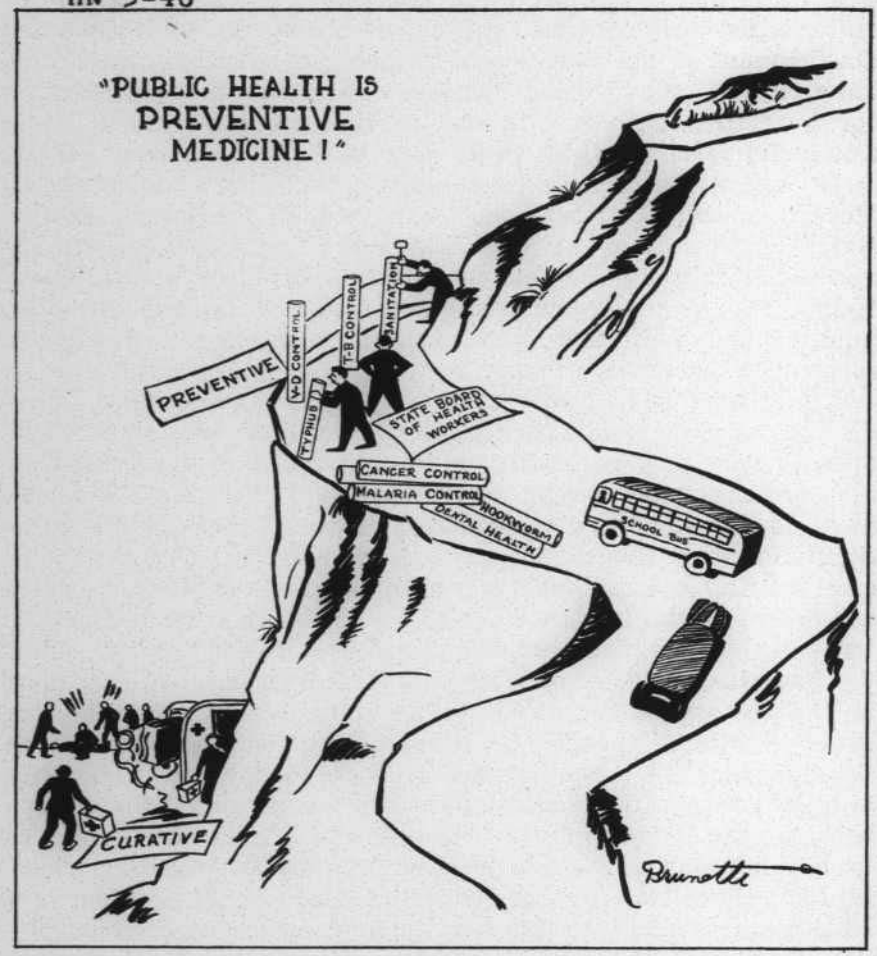
During the past five years, more than 5,000,000 tests were performed in State Board of Health Laboratories. This represents a service worth approximately $5,000,000 annually as measured by usual commercial rates. This monetary value, great as it is, is small compared with the significance of these tests in the protection of the public health. A pregnant woman found to have a positive blood test is treated for an unsuspected case of syphillis, and a healthy rather than a diseased infant is born. A water supply is examined and found to be unsatisfactory; necessary corrective measures are taken immediately and an epidemic is averted. Cases of this type multiplied again and again represent the true worth of a public health laboratory.

With the expansion of public health work in Florida, there is an increasing demand from County Health Departments and from private physicians for laboratory services, Physicians desire, and must have, easily accessible branch laboratories. The present branches are located in Miami, Tampa, Tallahassee, and Pensacola. Five other areas (Orlando, St. Petersburg, and three local health departments) have inquired concerning the possibility of establishing additional branch or county laboratories. There is further an urgent need for the expansion of the services of the central laboratory. At present the time and energy of the staff is consumed with routine diasnostic work. The Central laboratories of any progressive state health department should carry on an active research program and should manufacture certain biological products. In our future growth we must provide for these essentials. Florida needs a health department which will be widely recognized as one of the best in the country. Such recognition comes readily with credible attainments in research. More prospective tourist guests will be attracted here if it is widely known that we have an excellent health department and that the health of residents and guests of Florida is guarded with particular care. Thus Florida will receive double value for its expenditure in public health; her citizens will be protected and her best industry promoted.

Pest Mosquitoes:

(15) Another problem, which like the poor we always have with us, is that of the mosquito. This obnoxious insect, the mosquito, is not only a serious menace to the health and economic development of the state but it is also a colossal nuisance. The same physical conditions of warmth and sunshine, together with our beautiful lakes and beaches which make Florida such a wonderful place in which to live—or to enjoy a vacation—these same conditions permit the prolific breeding of mosquitoes. More than sixty different species have been recognized in the state but these may be classified into nine ecological groups and each of these have entirely different breeding habits. Their flight ranges vary tremendously, some being limited to a few hundred feet while some pest mosquitoes are known to have a range of fifty miles or more.

It is well known that certain species of mosquitoes carry diseases such as malaria, dengue and yellow fever. Although other species may in the future be found to be disease carriers they already stand convicted of retarding the economic development of this state to a tremendous degree. For some years the State Board of Health has carried on a campaign against disease bearing mosquitoes—and with unquestionable success. It has been several decades since there has been a case of yellow fever in the state, dengue has not appeared in several years, and the terrible scourge of malaria is at its lowest point of incidence in the history of the state. While undoubtedly other factors have contributed heavily to these accomplishments insofar as the occurrence of these diseases are concerned, there is no doubt at all as to the effectiveness of the campaign against the disease bearing species of mosquito. The question is asked frequently as to why not start a State-wide Campaign against all mosquitoes. In fact, there is a constant demand that the State Board of Health embark on a program of this character. Already legislation authorizes the formation of mosquito control district in the state, and many of these have already been formed, and funds raised. Under this act the State Board of Health is directed to furnish consultative service and to approve plans before they are put into effect. However, sufficient personnel with training in engineering and entomology have never been available to discharge its duties in this direction. The State Board of Health is anxious to carry out any function assigned to it by the legislature and for which the means are provided. Furthermore there is now cause for considerable optimism that, with the new weapons such as DDT at our disposal, definite progress could be made against pest mosquitoes.



Purpose of the Florida State Board of Health is to improve the general health through the dissemination of health information and preventive medical and sanitary measures. The private physician is concerned primarily in curing the sick, while the public health officer is interested in correction conditions of environment and preventing illnesses which affect the health of a community rather than that of an individual. The private physician works to cure; the public health officer to prevent.

Florida HEALTH NOTES

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A VISIT TO YOUR STATE LABORATORY

The State Board of Health

Hon. Millard F. Caldwell
Governor of Florida

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Broward	Ft. Lauderdale
Clay	Green Cove Springs
Columbia	Lake City
Dade	Miami
Dixie	Cross City
Duval	Jacksonville
Escambia	Pensacola
Franklin	Apalachicola
Gadsden	Quincy
Glades	Moore Haven
Gulf	Port St. Joe
Hamilton	Jasper
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Jackson	Marianna
Jefferson	Monticello
Lafayette	Mayo
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Madison	Madison
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Orange	Orlando
Pinellas	Clearwater
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Santa Rosa	Milton
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Sumter	Bushnell
Suwannee	Live Oak
Taylor	Perry
Union	Lake Butler
Volusia	DeLand
Wakulla	Crawfordville
Walton	DeFuniak
Washington	Chipley

Bureau of Vital Statistics
Clayton F. Mayo

Bureau of Preventable Diseases
Division of Venereal Disease Control
Division of Industrial Hygiene
R. F. Sondag, M.D.

Epidemiologist
Edwin G. Riley, M.D., Ph.D.

Div. of Venereal Disease Control
R. F. Sondag, M.D.

Bureau of Malaria Control
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Rockefeller Foundation
Tallahassee

Bureau of Maternal & Child Health
Lucile J. Marsh, M.D.

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Florida HEALTH NOTES

ESTABLISHER 1890

A VISIT

TO YOUR

STATE LABORATORY

Florida Health Notes, published *monthly* on the 25th of the month by the Florida State Board of Health Publication office, Jacksonville, Fla., headquarters of the State Board of Health. The editors are not responsible for unsolicited manuscripts. Copy for publication must reach Jacksonville not later than first day of month preceding date of issue. Entered as second class matter, Oct. 27, 1921, at postoffice, Jacksonville, Fla., Act of Aug. 24, 1912.

A VISIT TO YOUR STATE LABORATORY

The purpose of this issue of Florida Health Notes is to acquaint the people of the State with the Laboratory of the State Board of Health. Your official guide will be the Director of the Laboratory, Dr. Albert V. Hardy, a physician trained in public health and laboratory work.

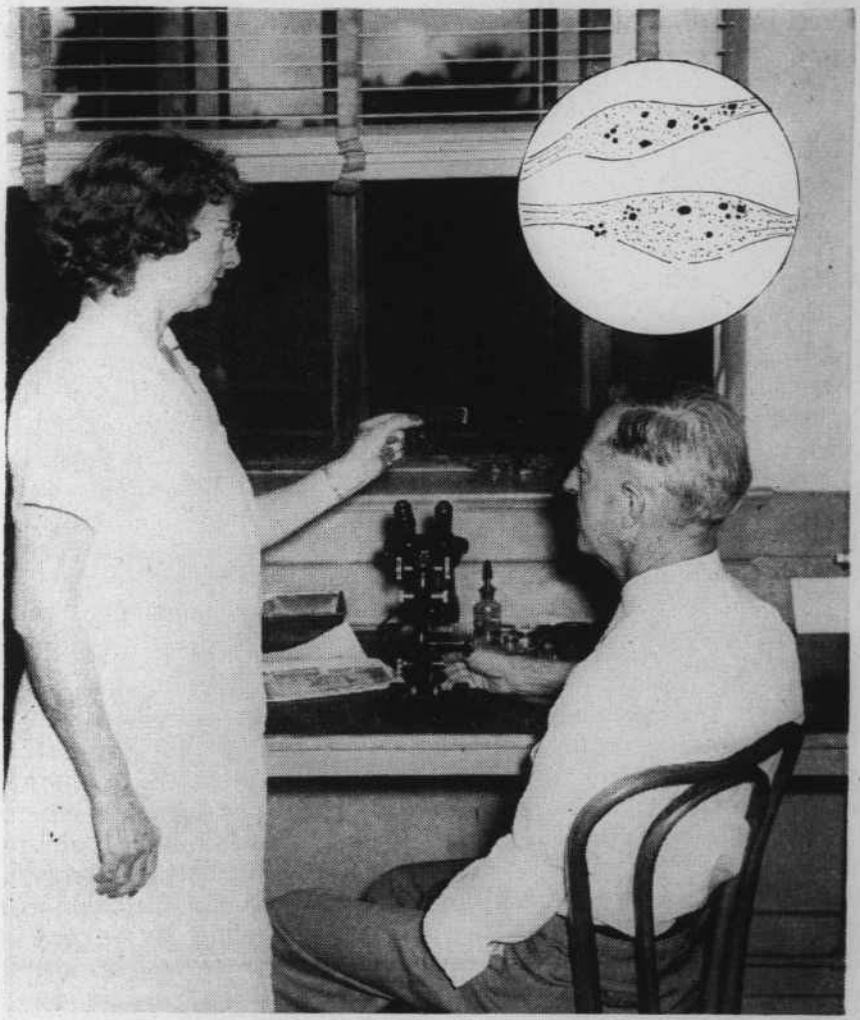
Dr. Hardy: We welcome this opportunity to meet you and have you see and hear a little of the work done in this field. Your laboratories were established and designed to aid in every possible manner in protecting the health of you, your neighbors, your community, and all residents of the State.

Before we start our tour I will give you a brief introduction to the Bureau of Laboratories and its various divisions. Of course, the central and largest laboratory is located here in Jacksonville, but we have four smaller, or branch laboratories in Tampa, Miami, Pensacola and Tallahassee. Each laboratory has four technical divisions, viz., **Bacteriology, Serology, Parasitology** and **Chemistry.** There is a technical chief who is responsible for the work of each division. Trained technical workers carry out most of the diagnostic tests. There are also non-technical assistants who wash and sterilize the hundreds of pieces of glassware required daily, assemble the mailing outfits used by physicians, and handle the incoming mail and outgoing reports.

Two of our present bacteriologists, Miss Pearl Griffith and Mr. Henry P. Brown, joined the laboratory when it was a very young division and have helped it grow from infancy to young maturity. On three occasions Miss Griffith served as Acting Director, most recently during the trying years of the past war. If you will follow me, we will meet Miss Griffith, then proceed with the tour. Miss Griffith, tell our visitors about some of the early work of the laboratory.

Miss Griffith: The history of the State Laboratory began in 1900 when the State Board of Health approved its establishment, but the work actually did not start until 1903. One of the first difficulties was to secure laboratory space, since it was erroneously believed by the general public that those who might go near a building housing a laboratory would be exposed to dangerous infection. However, quarters were eventually procured in a down-town business building.

Following the appointment of Doctor Henry Hanson as Director in 1910, the Laboratory began a period of substantial



Two of the Laboratory's oldest employees in point of service are Miss Pearl Griffith, bacteriologist, and H. P. Brown of the same department. They are considering a rabies slide which has been identified as "positive." The inset shows an actual drawing of the Negri bodies which cause rabies and which are to be found only in the rabid dog's brain. That is why persons destroying a suspect dog are urged to take every precaution to protect the brain. (Photo by RSA).

growth. A laboratory building was authorized, built, and opened in 1912 and the branch laboratories were established. Special studies of hookworm, malaria and other problems were undertaken. The number of diagnostic examinations rapidly began to increase. By 1915 the laboratories were doing about 40,000 tests per year (less than 1,000 were done in 1903). Forty thousand

seems a small number compared with more than the million tests which have been performed each year since 1940.

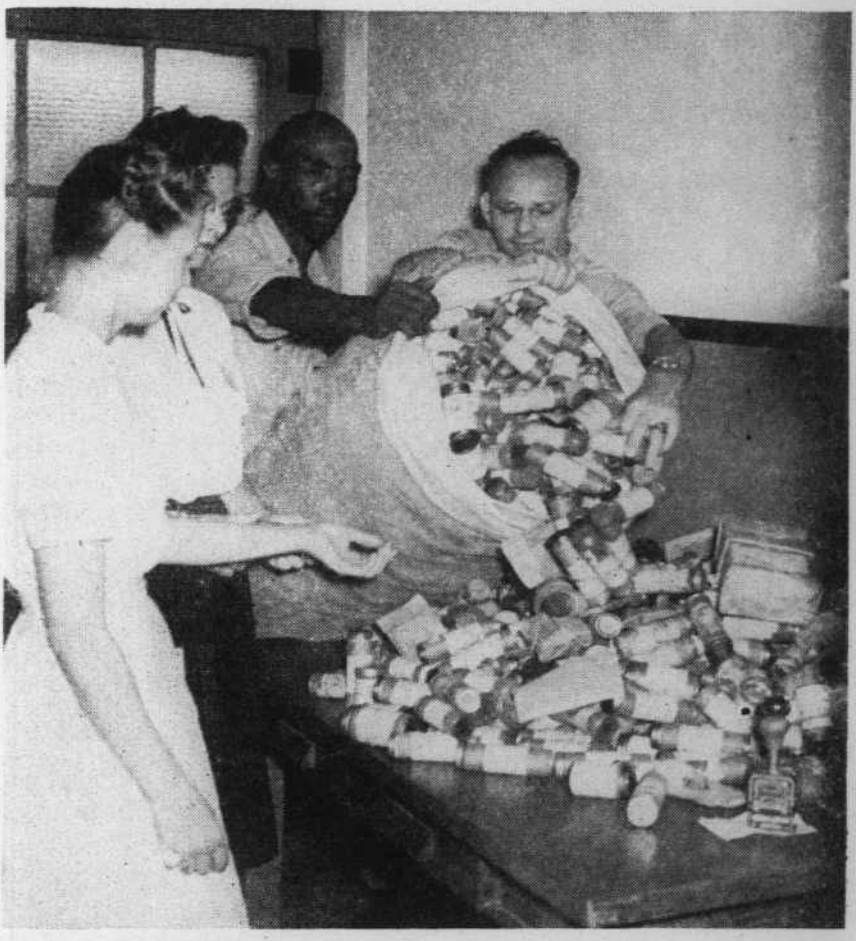
Doctor Hardy: What was the most interesting problem in the laboratory during this period of growth?

Miss Griffith: The most impressive one was that surrounding the outbreak of Bubonic Plague in Pensacola in 1920. There were only 10 cases with 6 deaths, but the laboratory was called upon to do many examinations in connection with the study and control of this outbreak.

Doctor Hardy: The unusual emergency adds interest, yet our important work is to aid in the diagnosis and prevention of diseases which occur commonly. To understand this clearly, let's start our tour by observing the handling of the incoming mail. **Between 2,000 and 3,000 specimens come to the Central Laboratory each day.** The opening of the specimen containers, the checking of the data slips, the numbering of the specimens and of each corresponding report slip is the first step in our laboratory routine. It requires a team of four to handle 250 specimens per hour. Numbering machines and checking procedure are used to eliminate error.

When the specimens are numbered, they are taken to the appropriate division for examination. We shall follow these first in the Bacteriological Division. Doctor R. B. Mitchell is in charge. He came to the Florida State Laboratories from the AAF where he was a member of one of the teams investigating communicable diseases. His team was assigned to the difficult problems in bacteriology. Before joining the Air Forces, Doctor Mitchell was with the Texas State Laboratories. 'Mitch," show our guests a few of the activities of your division.

Doctor Mitchell: We shall see first the work in **Sanitary Bacteriology.** This laboratory, as the name suggests, tests water, milk and other foods to determine if these are safe for human consumption. It is a responsibility of the State Laboratory to do periodic examinations on all public water supplies, and to test regularly the water which is used on trains, steamships and air lines. In Florida, much bottled water is sold. This must be tested. The water from private wells, bathing beaches and swimming pools also needs attention. Adding the examinations of milk and food we have an extensive and important activity. Miss Starck, who's in charge of this laboratory, will show you some of the tests performed and explain their significance.



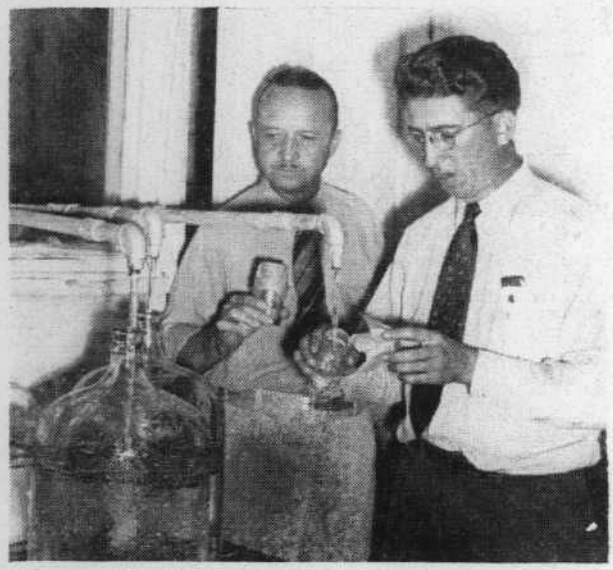
Mail time is a busy time in the Central Laboratory. Thousands of specimens are received each morning and dispatched immediately to the specific departments where highly trained technicians are poised, ready to begin their work of identifying the various diseases. The above picture gives some idea of the bulk of specimens which are received on the first mail each morning. (Photo by RSA).

Miss Starck: We have here the findings on two samples of water from water in Pineville. One can be reported as satisfactory, the other must be reported as unsafe. You will see in these tubes merely a uniform cloudiness throughout. This is due to the multiplication of harmless bacteria which occur in all water samples. In contrast, in the unsafe sample, you will observe that a large bubble of gas has collected in the inner fermentation tub. Gas is produced in this bacteriological medium only by organisms which commonly inhabit the intestinal tract. If the organisms are

found in water, it means that water has been contaminated by these body wastes. It is not alone unpleasant to consider drinking such water, it is also unsafe. Water polluted with any appreciable amount of sewage will have in it organisms which, when taken by mouth, produce human disease. We have therefore a simple test which warns us of the possible presence of disease producing bacteria in water.

This unsafe sample of water came from a supply which we examined repeatedly in the past. Until the last examination, the reports were always satisfactory. Last week the test showed "questionable." A repeat specimen was requested. On the basis of the findings which we have here, this water is being declared unsafe for human consumption. Without laboratory tests, this dangerous condition might have persisted for days or weeks until its presence was made known by some serious outbreak of disease. The work of a sanitary bacteriologist is to detect danger at the earliest possible time in order that corrective measures may be applied before any epidemic can occur.

Doctor Mitchell: Next we shall visit the **Diagnostic Bacteriology Laboratory.** In these two rooms, examinations are for the purpose of identifying carriers of typhoid, dysentery and related infections. This work is carried on by Mrs. Galton and her assistants. Would it be of interest to see just how a typhoid carrier is discovered?



Water samples from municipal water works, swimming pools, springs, wells and a myriad of other sources are submitted regularly to the Laboratory for testing. In the picture we show a local sanitarian collecting water sample. (Photo by RSA).

Mrs Galton: A small specimen of feces is required. This is sent to the laboratory in an appropriate preserving fluid. To prove that an in-

dividual is a carrier, one must grow the disease-producing bacteria and then identify them with certainty in the laboratory. On reaching the laboratory, a small amount of the specimen is planted. The composition of the media employed is such that they will grow the typhoid and related organisms quite satisfactorily but will not grow the numerous other types of bacteria which are found in the intestinal tract. The growth cannot be seen until the culture has been incubated for almost 24 hours. From the appearance of the growth, one can tell if typhoid or related organisms may be present. If so, the suspicious growth is transplanted and examined in several ways to identify it with certainty.

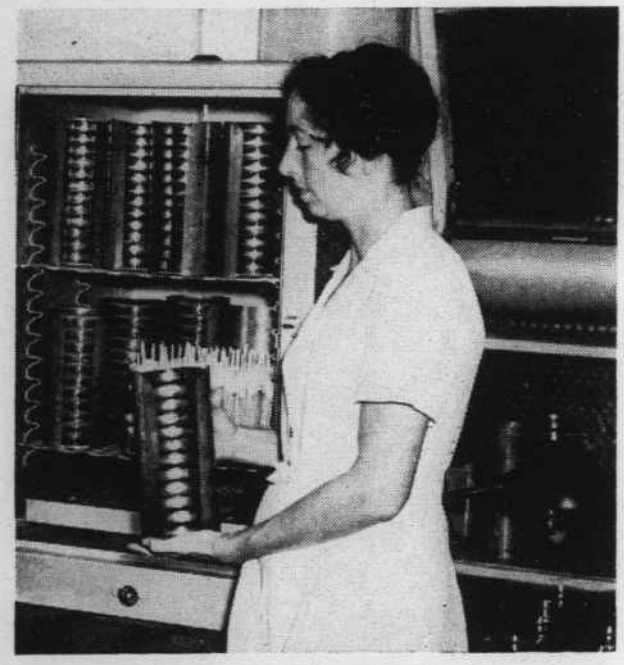
Above we see Miss Lena Starck, bacteriologist, examining the water sample after it has been through the routine test. Looking closely at the tube she is holding one detects a tiny tube within the tube. If there is contamination bacteria in the water it forms a certain gas, which in turn collects in the tiny, inner tube. Water in this instance was reported "negative." (Photo by RSA).

Dr. Mitchell: That is one of the several types of bacteriological tests. In other rooms sputum is examined for tubercle bacilli, throat swabs for diphtheria, animal heads for rabies, and swabs for gonococci. Blood is also tested to aid in the diagnosis of

typhus, undulant fever, tularemia, as well as typhoid and related fevers. The laboratory reports have double value, they aid the health officer who is concerned with the control of communicable diseases and they assist the physician who is responsible for the diagnosis of the illness and the effective treatment of the patient.

Doctor Hardy: The **Serology Division** is our other large division. Its work is best scheduled in one spacious laboratory room. The equipment required includes large water baths, centrifuges, shaking machines, refrigerators, much table space and many racks, tubes and pipettes.

Each year the quality of the work done in the **48 State Serological Laboratories** is evaluated through tests conducted by the U. S. Public Health Service. Our Florida laboratory ranked with the best. A Florida girl, Miss Carolyn Roth, has given her State one of the best serological laboratories in the country. Miss Roth, how many specimens do you examine?



Mrs. Mildred Galton, in charge of the division where food poisoning and other types of bacteria causing diarrhea and intestinal upsets as well as typhoid fever are identified, is shown in pic ure placing cultures in the incubator. This process isolates, or separates the various bacteria found in stool specimen. (Photo by RSA).

Miss Roth: We receive as an average between **1,200 and 1,400 blood specimens daily.** On each of these the standard diagnostic test is performed; on some additional tests are needed or requested. A special quantitative examination is indicated for patients under treatment. This enables the physician to measure the response to therapy. These extra tests are time consuming but of highest importance. Or-

Above shows the final test which through microscope and various dyes enables her and her experts to say exactly what disease has attacked the individual (Photo by RSA).

dinarily on 1,200 specimens we do at least 1,500 separate tests.

Doctor Hardy: The Serological Laboratory, as you know, is conducted to assist physicians and health officers in the diagnosis of syphilis. It is not adequately appreciated that the control of this infection is one of the major health problems in Florida, as in every State. The essential features of an effective Public Health program are to find cases early, to treat adequately and to determine by subsequent examinations that therapy was effective

in the particular individual. For the first and the last of these the physician must rely largely on the serological laboratory. Miss Roth, what proportion of the specimens come from Public Health clinics?

Miss Roth: About one-third. The remainder come from practicing physicians. The latter includes the examinations of food handlers, beautitians and barbers for health cards, as well as the premarital and prenatal tests.

Dr. Hardy: Have the laws requiring **premarital and prenatal serological tests** brought much additional work to the laboratory? These laws went into effect on October 1, 1945.

Miss Roth: Yes, they have. **For the first six months of 1946 we did serological tests on 20,941** individuals desiring to obtain a marriage license, an additional 17,994 specimens were from expectant mothers. There were in all 2,247 positives among these.

Dr. Hardy: The finding of these infected individuals undoubtedly has prevented the transmission of syphilis to many marital partners and its development in many unborn infants. This is excellent preventive medicine. Laws such as ours are in effect in 36 of the 48 states. The informed persons recognize that it is wise to have serological tests at these important times for the laws are designed to extend this desirable health protection to all. Anything further, Miss Roth?

Miss Roth: Let me urge that the premarital blood tests be taken well in advance of the wedding date. The serological certificate remains valid for 30 days. Almost daily some couple appears with a longing request for a report as soon as possible. Specimens from such couples are also sent by

The Serology division of which Miss Carolyn Roth is in charge is overcrowded and understaffed. But even under these conditions nearly 2,000 tests for venereal diseases are completed daily. In the inset we show the infamous corkscrew-type spirochette germ which causes syphilis. Most prenatal and premarital blood tests required by law are made in this division. (Photo by RSA).

mail. We give special attention to these specimens, but it takes time to do these tests. Earlier planning by those to be married would help us and prevent disappointment. Time should be allowed for the repeat examination which may be needed.

Just to prove that "it can happen here," Mun S. Quan is showing Dr. Marion Hood, director of the division of parisitology, a collection of round worms sent to the laboratory in connection with an individual's treatment for the parasites. Technically the worms are known as Ascaris. They are not particularly common, nor a specific problem in Florida, compared with hookworm, for instance. (Photo by RSA).

Dr. Hardy: We shall see next our **Division of Parasitology.** This has been reorganized and expanded in recent months. A recognized authority in parasitology, Dr. Marion Hood, was obtained. She came to us from the Louisiana State School of Medicine and the Charity Hospital in New Orleans. The physicians of Florida will have at their disposal the best diagnostic service which can be made available. Dr. Hood, show us a little of the work of your division.

Dr Hood: Our technical workers are all at the microscope. Diagnoses must be made by finding and recognizing the microscopic eggs of worms and the very small unicellular or multicellular parasites.

The fecal specimens are concentrated before examination. The eggs of each worm has a characteristic appearance. The photograph shows the eggs of the commonest worm parasites in Florida, the hookworm and a larger round worm called Ascaris. In most instances the eggs are laid in the intestinal tract and are found by obtaining the feces. The pin worm crawls to the exterior and lays its eggs immediately surrounding the anus. Examination for these requires the use of a special swab made of cellophane. The second photograph shows the eggs found on examining one such swab.

Doctor Hardy: Do you consider that these parasites are the most important ones found in Florida?

Dr. Hood: They are the forms which have received most attention. We also have one-celled animal parasites, amoebae, which produce an infection that is very serious in some cases. It is undoubtedly common, but often unrecognized. We are only beginning to give this trouble-maker the consideration which it deserves.

Dr. Hardy: What about blood parasites?

Dr. Hood: Approximately **1,000 blood films from about 600 patients are examined monthly for malaria parasites.** Almost 2% of these are

in the particular individual. For the first and the last of these the physician must rely largely on the serological laboratory. Miss Roth, what proportion of the specimens come from Public Health clinics?

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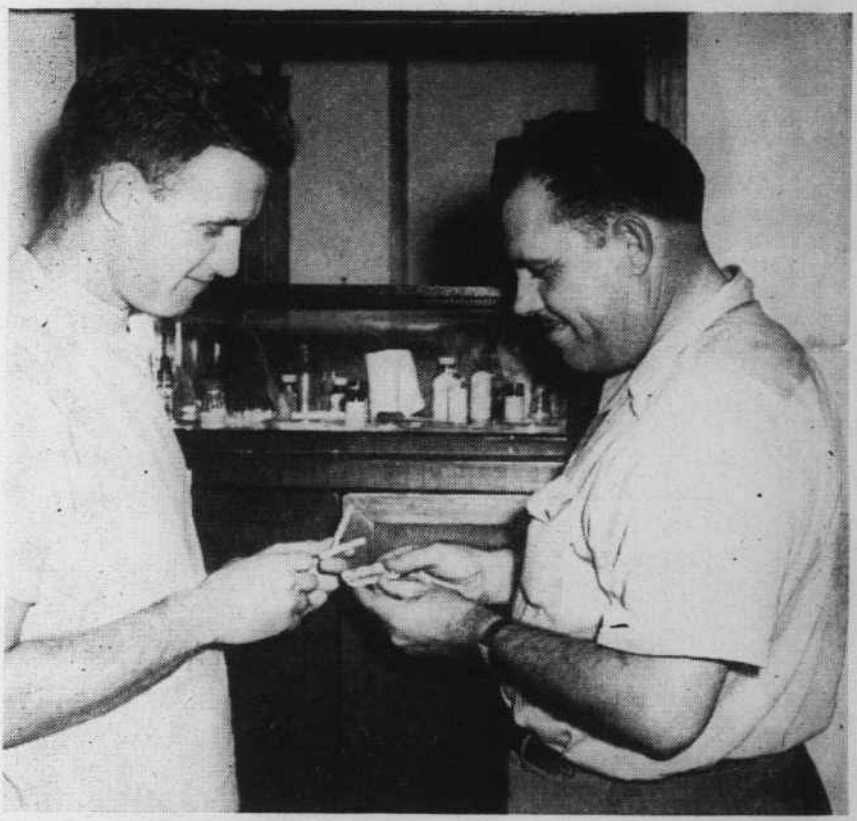


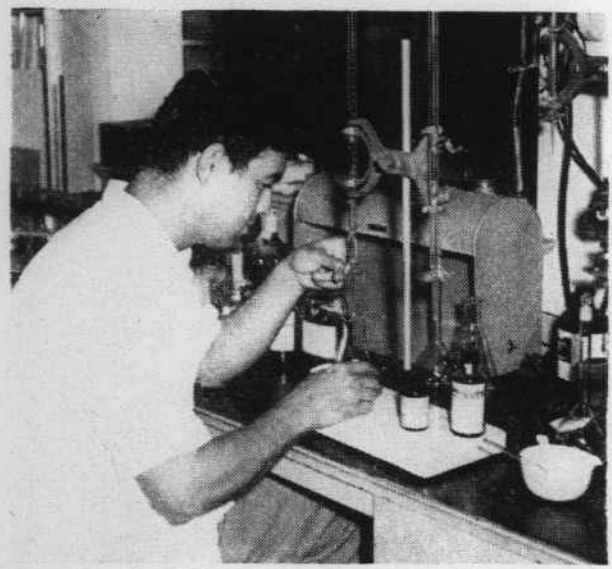
Dr. Herman I. Chinn identifies marijuana cigaret, one of a supply picked up by H. M. Doss' Bureau of Narcotics. (Photo by RSA).

sary for the chemist to appear in court as an expert witness. Mr. Nelson, what were some of your recent cases?

Mr. Nelson: Examination of narcotics, food, liquors and suspected poisons comprises the bulk of this work. For example, police confiscate some cigarettes in a raid. We examine them for marijuana. Another man is caught peddling "dope." The seized material is sent to the laboratory and is found to contain morphine. A sample of milk is suspected of being "watered" or "skimmed." Laboratory analysis confirms or refutes these suspicions. Frequently, the alcoholic content of beverages sold illegally must be determined. Occasionally, at the request of the court, the laboratory has to determine whether an individual or animal was poisoned. In a recent case the poison was found in eggs intended for a neighbor.

Dr. Chinn: In order to be of even greater service to the people of Florida, the chemistry division is in process of expansion. Shortly, it will aid in studies of Industrial Hygiene. The degree of exposure to carbon monoxide, lead, mercury and other chemical agents must be determined in the laboratory so that effective control measures may be adopted.

Dr. Hardy: At the Central Laboratory we cannot show you the work of our branch laboratories. The larger ones in Tampa and Miami conduct



One of the Central Laboratory's newest innovations is the crime laboratory or chemistry division, with Dr. Herman I. Chinn in charge. Here, we see Howard M. Nelson of that division running a test to ascertain the amount of opium contained in a submitted specimen. Duties of the division are varied and will be closely allied with law enforcement and the State Board of Health's Bureau of Narcotics. (Photo by RSA).

found positive. Largely through the efforts of the Malaria Control Division, local malaria is not common. Most of the positive findings are in ex-service men who have been stationed abroad. The malarial relapses must be correctly recognized in order that the individual may be treated effectively, otherwise the disease may be a menace to the patient as well as to the community.

Dr. Hardy: We shall hear last of the **Chemistry Division.** The chief is **Doctor Herman I. Chinn.** He came to us recently from the AAF School of Aviation Medicine where he was in charge of **Pharmacology** and **Biochemistry** research. His assistant, Howard Nelson, has carried as much work as possible during the war years. Dr. Chinn, will you tell us what you believe to be the function of the Division of Chemistry.

Dr. Chinn: This can be shown best by illustrations. Among the most important of our functions is the chemical control of the public water supplies. Such control supplements the bacteriological safeguards already described and guarantees safe and palatable water to the public. Mr. Nelson is in charge of these analyses and will briefly describe the work to you.

Mr. Nelson: This work is done in cooperation with the **Bureau of Sanitary Engineering.** Samples of raw and treated water taken from any municipal supply are submitted and analyzed. The adequacy of treatment is thereby determined and recommendations are made for more effective or economical processing. Sewage is subjected to similar tests to insure effective treatment. For example, in a recent pollution survey of the St. Johns River, requiring 1½ years to complete, this laboratory performed over 1,700 analyses. Incidentally, this survey was typical of the cooperative nature of our work. The U. S. Public Health Service, U. S. Geological Survey, Bureau of Engineering, the Bureau of Laboratories and the City of Jacksonville, all participated in this study.

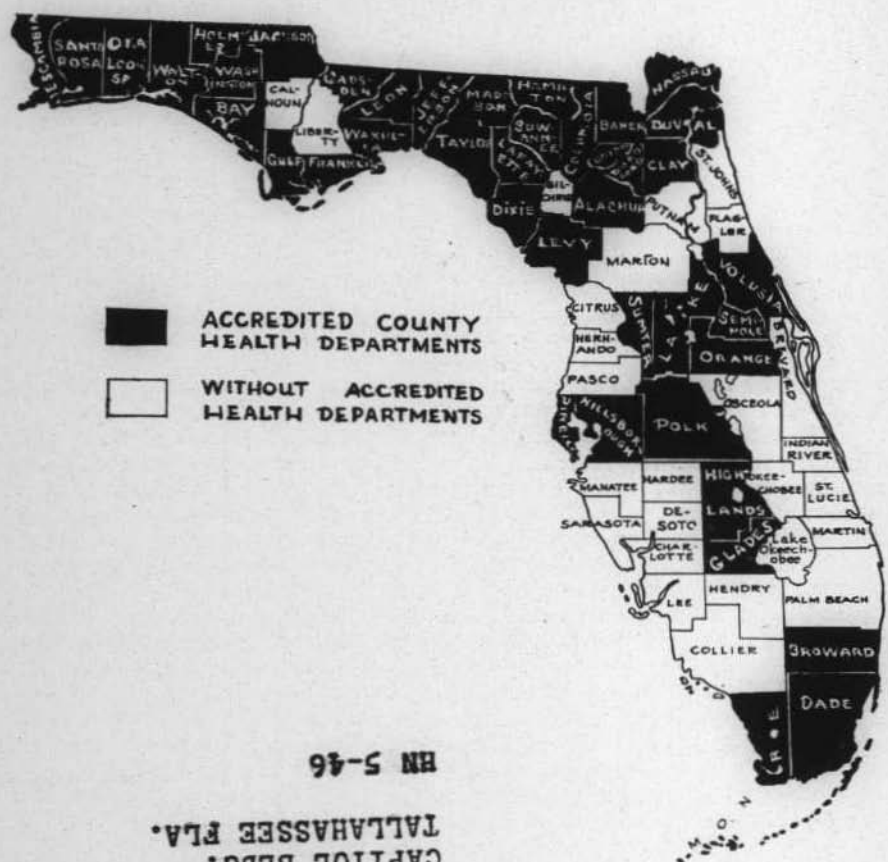
Dr. Chinn: Another responsibility of the laboratory may be termed legal chemistry. In this work the laboratory aids in obtaining evidence concerning the guilt or innocence of an individual charged with certain violations of the law. In connection with this work, it is frequently neces-

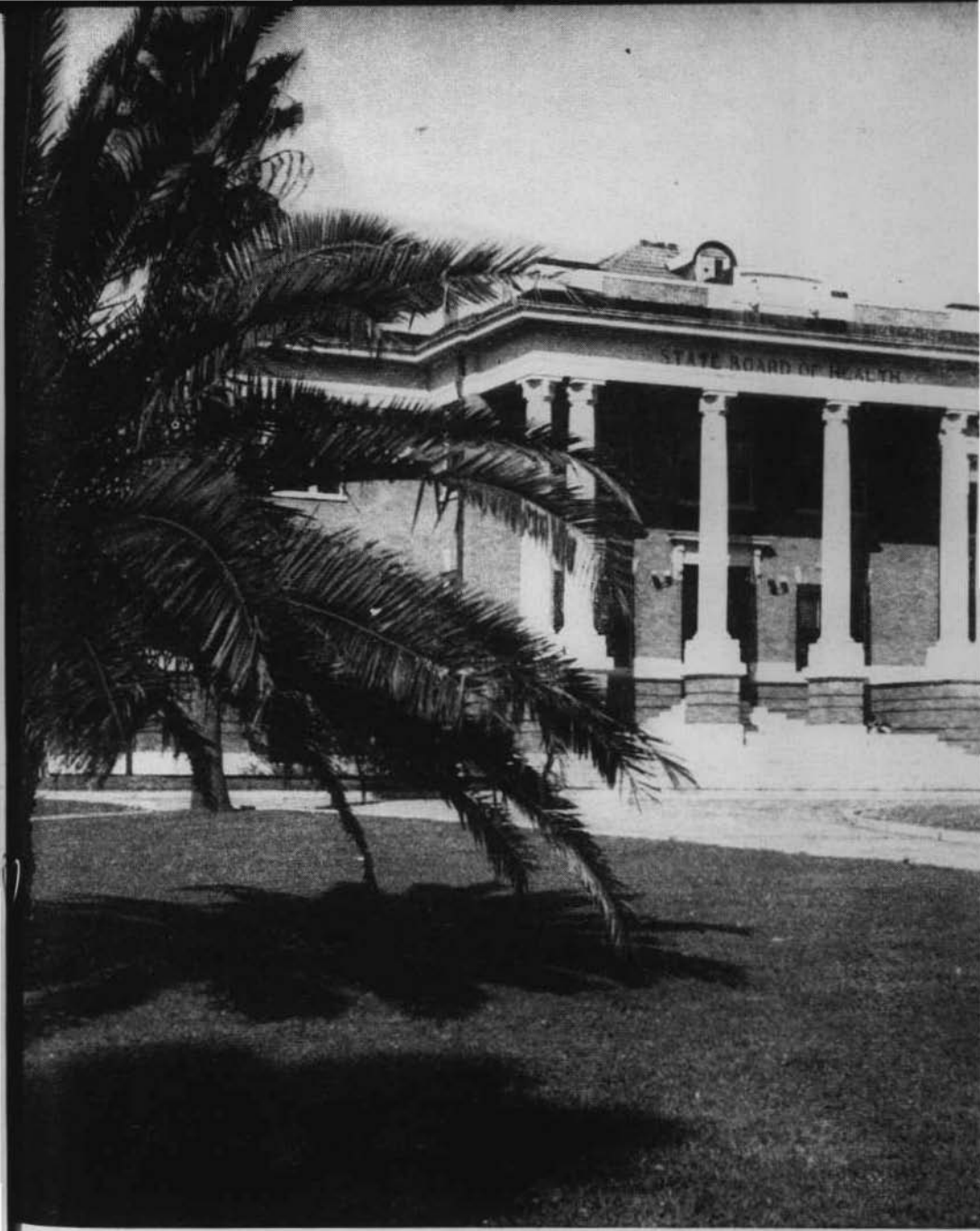
most of the same variety tests done in Jacksonville. The chiefs, Mr. H. D. Venters and Mr. W. H. Miller, in a very able manner carry the responsibility for the work done under their direction. There are smaller branches in Tallahassee and Pensacola. A fifth should be established in Orlando as soon as possible.

We feel apologetic for the crowded appearance which is so evident to visitors in the laboratory. Additional space for laboratory work was last made available in 1937. Since that time the amount of work has not only doubled, but trebled. A new laboratory building was planned and approved in 1942, but due to war restrictions it was not built. It is needed even more at present.

The handling of more than **one million diagnostic specimens** per year represents a heavy load of work and big contribution to our state. Still a progressive state cannot be satisfied with merely applying medical knowledge; we must do our share in extending it. Hence the future goal is to have an ever improving diagnostic service and an investigative program which will do credit to Florida.

STATE OF FLORIDA





Florida HEALTH NOTES

PUBLISHED BY THE FLORIDA STATE BOARD OF HEALTH

JACKSONVILLE • OCTOBER, 1946 • VOL. 38 • No. 10

YELLOW FEVER IN FLORIDA, 1877

The State Board of Health

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Governor of Florida

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Florida HEALTH NOTES

ESTABLISHED 1890

YELLOW FEVER IN FLORIDA, 1877

EDITOR'S NOTE:

We give you the following story about the yellow fever epidemic in North Florida in 1877 through the courtesy of Dr. J. Webster Merritt, Jacksonville, and the Journal of the Florida Medical Association.

The story graphically reveals that human beings, whether in the year of 1877 or 1945, suffer the same nervous reactions when the health of their loved ones is endangered by a common enemy.

It shows too, the ever ingeniousness of individuals as they grope for a means of throttling a condition "whose cause is anybody's guess." Fear and hysteria rode North Florida during the yellow fever epidemic. And with that chaos came various suggestions for ending the disease which respected neither creed, race nor sex. That "any action is better than no action" during such times seems typical and natural, whether it be wildly aimed or properly directed. Nor is the demand for action under such circumstances entitled to too severe a criticism in retrospect.

Quarantine against one's neighbors was not unpracticed either, around the turn of the century. And Duval County's action against Fernandina brought faith, hysteria and condemnation. However, one must remember that knowledge about communicable diseases, their spread and control, was not as advanced fifty years ago as it is today.

It is gratifying to note too, that when Fernandina was in her most incapacitated state that Jacksonville was the first to render aid through supplies and professional aid—even to the extent of one of its noted physicians making the supreme sacrifice.

The story is particularly warming as it points out that unselfish services on the part of man are forever perennial That men and women of fifty years ago, just as today, willingly dedicated their lives to serve fellowmen and counted not the tragic cost.

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We thought it good and timely too, to point out to our readers that communicable disease control has come a long way in Florida since the holocaust which struck Fernandina broadside and "disrupted all of Jacksonville's organized activity through fright and panic." That although the State has its current public health problems, there are but a few which have not been earmarked for control, once the economic angle has been corrected.

It is good to know that YELLOW FEVER is no more. That DENGUE FEVER (breakbone) is also a thing of the past. That MALARIA FEVER, recognized as "the worst scourge of mankind" is considered "negligible" in Florida. All this, because the "reason" has been found and men now progress in a sane and orderly manner to control that reason.

Where all three diseases once struck terror to strong hearts, they are scarcely considered today but for the necessity of keeping the machinery moving toward their control. Hysteria and cold, gripping fear which once accompanied them is now but a bad dream—all because "we know the reason why" and are in position to act accordingly.

Cancer, which claimed 2,302 lives in Florida last year, is also loosing its terror for its victims. Although we don't yet know the source of cancer, we do know that IT CAN BE CURED WHEN FOUND IN TIME. That the big job today lies in community adult education—in impressing upon folks the importance and necessity for consulting their private physicians—thus finding cases in their curable stages.

This will be the story some day too, of poliomyelitis. When science reveals what may well be a very simple cause of this child-attacking, crippling orgy of the disease world, fear and panic will drop away. Children who might have spent their lives on crutches and in braces will be bright, skipping youngsters and finally, self-sufficient adults. All because science, as in the past, will have found the "reason"

Again, we give you the following article which is a happy reminder that we have come far in public health measures during the past half century. But we also must remind you that there is still a long, uphill climb if preventive medicine is to function to its maximum in its natural field, public health control.

YELLOW FEVER IN FLORIDA, 1877

Early in the summer of 1877 Dr. Daniels, president of the Duval County Medical Society, suspected that there was more than the usual amount of malaria in east Florida, and as summer advanced, reliable reports came in from sections along the St. Johns River which confirmed his suspicions. There was yet, however, no serious illness in Jacksonville although there were rumors and whispers to the contrary.

On August 7, **Dr. Baldwin,** chairman of the health committee of the Jacksonville Board of Health, wrote to **Dr. Daniels:**

> **"Dear Sir: There has appeared in one of our city papers a statement that the health of our city was unusually bad during the month of July just past. Such reports are calculated to injure our place, if they should have truth for their foundation, and if not true should be promptly corrected. The recorded statistics show quite a small mortality, to wit: ten deaths in all, and of those only six were reported as being residents of the city.**
>
> **Our population is estimated to be at least 10,000; the death rate for July therefore, is only one death in 1,000 of our population and would speak volumes in favor of the healthfulness of our city. Have you or the other members of the medical society—knowledge of any such unhealthfulness as has been reported?"**

Dr. Daniels replied:

> **". . . I am authorited by all the members of our society with whom I have been able to meet—to state . . . that the amount of sickness during the month referred to was small . . . the very low death rate was reported by yourself, will sufficiently prove the absence of any special grave type of fever . . ."**

YELLOW FEVER IN FLORIDA, 1877

Fernandina, however, was beginning to have serious difficulty at this time, and for her the season was to be disastrous. Early in August there were frequent rumors of an unusual amount of fever of a very grave type there, but the reports were promptly denied.

In late August Dr. A. W. Knight, Jacksonville City Health Officer, was sent to Fernandina to make an investigation. On August 31, he wrote to Mr. T. A. Wilson, Mayor pro tempore of Jacksonville, and Mr. T. S. Eells, President of the Jacksonville Board of Health:

> **"Gentlemen: In compliance with your orders I visited . . .Fernandina, arriving on the night of the 29th inst.**
>
> **I immediately conferred with the mayor of the city and health officer, Dr. Pope.**
>
> **On Thursday, 30th with Dr. Pope I visited all of his patients and in company with Dr. Pope and Dr. Palmer (J. Denham Palmer) assisted in making a post mortem examination of a little boy who died the day before. We then examined every portion of the city.**
>
> **There were three deaths previous to my arrival . . . The cases on hand were evidently bilious, remittent fever as decided by the concurrent opinion of Drs. Pope, Palmer and myself . . .**
>
> **On the western side of the city west of Centre Street is a swampy place with ditches all obstructed and in a fearful condition. The present sickness is confined to that locality.**
>
> **There is abundant cause of fever of a very malignant type and about 25 persons are sick . . . some with grave symptoms.**
>
> **Now in view of the above facts, I would ask the Board of Health to carefully consider all measures necessary to be taken of a precautionary character to prevent any contagious disease from being imported into our city."**

The Jacksonville Board of Health met immediately and quarantined against Fernandina on September 1, **whereupon much excitement ensued.**

On September 4, a letter from Dr. Palmer to Dr. E. T. Sabal appeared in a local paper strongly denying that there was yellow fever in Fernandina and inviting Dr. Sabal, Dr. Wellford, President of the Florida Medical Association, and Dr. Daniels to inspect the city. Dr. Kenworthy recently had made a visit to Fernandina and had reported that there was no yellow fever there.

The controversy became bitter. Editorials appeared, one of which, addressed to the public in the form of a letter, explained

the reason for the quarantine and stated that after the next meeting of the Jacksonville Board of Health, Dr. Knight probably would be sent to make another inspection of Fernandina. This second trip was not necessary.

On September 7, at 7:30 p.m., the Fernandina Health Officer, Dr. Pope, and Mayor Riddell officially notified Mr. Thomas Eells, president of the Jacksonville Board of Health that yellow fever was prevailing in Fernandina. **Following this notification the Board of Health received due appreciation.** An editorial in a local paper stated that the Board's action had been all that could have been desired and that the people would thenceforth support it cordially in all its proceedings.

At a special meeting of the Board of Health at noon on September 8, quarantine officers were stationed at Callahan, Kings Road and White House with instructions to stop all travellers from Fernandina for Jacksonville. Likewise, officers were stationed on the Nassau River at Turner's Ferry, Broward's Ferry, Yellow Bluff and Holmes' Mill, and quarantine also was ordered at the "Haul Over." One sanitary inspector was appointed for each ward of the city and was ordered to report to the Health Officer at noon and at 8 p.m. daily.

On September 10, Mayor Willson issued an official proclamation, stating that any person evading the quarantine "will be punished by a fine not exceeding fifty dollars, or imprisonment for not more than sixty days."

One week later, at another meeting of the local board of health a "picket guard" was organized, twenty by day and forty by night, and a "picket boat" was established at Commodore's Point.

In mid-September the epidemic in Fernandina was assuming such proportions that the local health officers, physicians and relief organizations could not cope with their problems. It became necessary for that city to call for help, whereupon Jacksonville, which had been the first city to quarantine against her, became the first to render her aid in the form of supplies.

In answer to the call to physicians for aid in the holocaust, Dr. Wellford volunteered his services and on September 22 left for Fernandina by train—never to return. On September 24, Captain Grossman of Fernandina wrote: "Dr. Wellford, who so nobly volunteered to come to our aid, is hard at work—his cheery

smile and pleasant voice bring comfort and hope to many a patient."

On September 30, Dr. Wellford wrote to Dr. Daniels in Jacksonville:

> **"Dear Doctor. I am tired after over fifty visits today. Dr. Martin and—I are the only active helpers professionally, the others from sickness and . . . unavoidable causes being eliminated . . . I am hearty and well and on the principle of 'naught ne'r being in danger' am brighter and brisker than half the people here. Don't think I am either reckless or boastful. I appreciate life as most, but thank God, I appreciate something higher still than mere physical existence.**
>
> **When you kneel down at night to offer thanks for present favors and future good implore, ask for me that God bless that immortal heart which will survive the grave, and if your prayer be granted I care not how soon the summons may come."**

It may be that Dr. Wellford was beginning to feel ill when he wrote this letter, for the following night, October 1, he went to bed with fever. A few days later the Duval County Medical Society sent Richmond Kinloch, a colored man experienced in nursing patients with yellow fever, to Dr. Wellford's bedside.

On October 5, it was reported that "Dr. Wellford is in a very critical condition this morning. Everything that science and friendship can suggest is being done for him." On October 10, at 10 o'clock in the morning, Dr. Wellford died. That afternoon funeral services were conducted at St. Peter's Church in Fernandina and the bells of the churches tolled. He was buried in Fredericksburg, Virginia.

Mr. U. Sinclair Bird, secretary of the Fernandina Sanitary Commission, wrote:

> **"Our hearts were drawn to him by the sweet attraction of his gentle and tender kindness . . . he excited our admiration and gratitude by his eminent skill and intrepid devotion. Jacksonville could not have sent us a nobler gentleman, a purer man, a more skillful physician."**

At a special meeting of the Duval County Medical Society, October 12, the following resolutions were adopted:

> **"His courtly gentleness and modesty of manner, his kindly yet high toned ethics in all his professional relations,**

his unselfishness in everything that related to friendship or duty alike ever marked him as one endowed with all these attributes of head and heart which unite to make the accomplished physician and Christian gentleman.

Resolved, third, that as a mark of esteem his name be kept on our roll and called at each meeting."

The following year, at its regular meeting, the Florida Medical Association honored signally its dead President. Dr. Wellford had served his stricken neighbors and had counted not the cost.

It is difficult to conceive the hardships which Jacksonville's neighboring city encountered during the summer and fall of 1877. On October 27, it was announced that 800 families were helpless, while a few days later Dr. Blackburn reported that the fever was at a standstill among the white population for there was "no material for it to work on."

A census of Fernandina, taken on September 28, had shown a population of 1,632, 1,146 of whom had the fever. There were 24 deaths, a mortality rate of about 5½ percent of the total population. Among the white people the mortality rate was about 16 percent while among the colored it was less than one percent.

Physicians and nurses came from many parts of the United States to lend aid, and contributions from widespread areas to the relief fund amounted to more than $26,000, but suffering, nevertheless, was intense. The epidemic left the people of the town was almost destitute while business, which depended chiefly on shipping, was utterly prostrate.

Jacksonville was next on the roster of epidemic catastrophe.

The summer of 1877 was hot and sultry. An old citizen of Jacksonville wrote to a local paper that the weather was the most oppressive and debilitating he had ever experienced. The summer and fall were not only hotter than usual, but the rainfall for July, August and September was markedly below average. This so-called unfavorable weather may have been the reason why there was at first no unusual amount of serious sickness in Jacksonville despite the yellow fever epidemic in Fernandina. Because of the drought the mosquitoes had fewer places to breed.

Dr. R. P. Daniel, President of the Duval County Medical Society, reported that during the months of August and September he saw fewer patients with fever than he had seen during the

similar period for many years. But despite verbal and written declarations that there was no unusual amount of sickness in Jacksonville, rumors to the contrary persisted, and there was an air of muffled excitement in the town. There seemed to be an expectancy of impending trouble.

At a meeting of the Jacksonville Board of Health on September 10, President Eells read a communication from the Duval County Medical Society, and forthwith, in accord with suggestions from the society, the board passed the following resolution:

> **It is hereby ordered, that . . . practitioners of medicine in this city . . . be required (under severe penalties) to call immediately in consultation, 2 or more members of the Duval County Medical Society, before announcing their individual opinion as to the character of (any suspicious case of fever.)**

In mid-September, the Duval County Medical Society met again and adopted the following resolution:

> **Resolved that the president of this society shall . . . attended at his office between the hours of 8 and 8:30 P. M. for the purpose of hearing reports . . . upon the subject of fever . . . the non-appearance of any member shall be a positive assurance that such member has nothing to report for that day. And, the president shall . . . daily certify . . . to the President of the Board of Health the result . . .**

Accordingly, on September 18, the following report appeared in a local paper:

City Health Report

Jacksonville, September 17. 8:30 PM

Hon. T. S. Eells
President Board of Health
Sir: Under recent resolution of Duval County Medical Society, that their President should . . . make a daily report to the public through you, as to whether any of the members of this society have found in their practice or have any knowledge of any case simulating yellow fever I would respectfully report none up to this date.

Your obedient servant
R. P Daniel
President, Duval County Medical Society

In October the weather became disagreeable. The men who were standing picket guard on the outposts of the town to quarantine against travelers from Fernandina, were subject to exposure. Dr. Kenworthy's suggestion that whiskey rations might

be beneficial to the guards precipitated much discussion and brought forth in a local paper the following amusing note:

WHISKEY ON PICKET

The kind offer of Dr. Kenworthy to contribute toward a fund that should secure whiskey rations for the picket guard during the wet disagreeable weather . . . has drawn out a strong expression of opinion from almost every man in Town and such diversity of sentiment was never known before. One thinks it a splendid idea, while another is sure to denounce it. While one man asserts that four ounces of whiskey are most ample, others maintain that sixteen would be far more appropriate. Some would prefer their whiskey straight, while others declare that an addition of quinine would be a decided improvement. The great majority who have performed picket duty see no very serious objection in wetting their whistle when they find themselves wet completely through, but the Good Templars and Sons of Temperance express their partiality for hot, strong coffee every time

Business activity in Jacksonville was declining, and fear that an epidemic of disease was imminent seemed to be increasing. On October 9, a "document" was issued and was forwarded to Mr. W. S. Boyd, Mayor of Jacksonville, who was ill in Philadelphia. This declaration, intended for publication in the Philadelphia papers, read as follows:

To the Public

This is to certify that there is no contagious or infectious disease existing in the city of Jacksonville, Florida . . . that there has not been a case of yellow fever or anything resembling a case of yellow fever this season . . and that the city is in all respects healthy.

Thos E. Eells
Pres. Board of
Health of Jacksonville

A. W. Knight, M.D.
Health Officer
City of Jacksonville

Thos. A. Willson,
Major Protem

R. P. Daniel, M. D.
President, Duval
County Medical Society

Jas. B. Crabtree
Sec'y and Clerk
of Council

It would appear that the **health officials** and **city authorities** were **"protesting too much."** Cases resembling yellow fever had appeared prior to this time, but it was hoped that a panic could be avoided. The yellow fever season was waning as winter approached.

On November , Mr. Eells wrote a letter to the public directing attention to the daily health report of the president of the Duval County Medical Society. He decried the rumors of fever in Jacksonville despite these reports. **Actually there was sufficient reason for these rumors.** About the middle of October the

members of the medical profession had begun to realize that there was an unusual amount of fever in Jacksonville. At this time, however, few of the cases were "formidable," and the mortality was low. On October 27, the first "undoubted case" of yellow fever appeared and on October 30 the patient died. After this time there were many deaths. On November 10, the daily health bulletin was discontinued, and the following notice was published:

By authority of the president of the Board of Health and in consideration of the period of the fall, the cool change and the present health of the city, the daily health certificate will, from this date be discontinud.

R. P. Daniel
President Duval County
Medical Society

A few days later, however, the members of the medical profession felt that **the truth could be withheld from the public no longer.** On November 4, Dr. Daniel wrote the following letter to Mayor Boyd, who had returned to Jacksonville:

Hon. W. Stokes Boyd **Jacksonville**
Mayor & **Nov. 14th 1877**
President Board of Health
Sir:

Within the past two weeks a number of cases of fever have occurred in and around the city, principally in the western suburb, on the south side of the Pond, and in the neighborhood of the Waverly House; several of these have proved fatal. Drs. Mitchell, Sabal, Knight, Holt, Fernandez and myself have all had one or more cases.

Our duty to the authorities, the community and ourselves, compels us to recognize the undoubted features of yellow fever in these cases.

We have conscientiously withheld this fact from the public up to this time, earnestly hoping and trusting that the late period of fall would have given us such a temperature ere this as would have stamped out all fevers; and feeling that a few additional days of exposure would, by no means, jeopardize the health and lives of this community as much as would the probable panic and its consequences if our convictions had been made public.

And now, whilst we have no right to withhold the truth, we still sanguinely hope that a very few additional days of risk will carry us out of danger.

Respectfully
R. P. Daniel
President Duval County
Medical Society

In the same issue of the paper in which the letter was published, Mayor Boyd inserted a bulletin addressed to the citizens of Jacksonville, in which he said:

> **. . I do not fear that the disease can become epidemic and hope that the community will not evince anything like a panic, but remain quietly at their homes, taking every precaution. after consulting with their respective physicians . . . Our warm season has been protracted unusually long and we confidently hope for frost in a few days which will stay the progress of the disease . . .**

Words of caution and warning, however, were of no avail. Almost immediately was much excitement on the street, and it was estimated that within thirty-six hours nearly 800 people had left the city by boat and train.

At a meeting of the Board of Health on November 16, Colonel L. A. Hardee, a citizen of Jacksonville who apparently had had no scientific training, appeared before the board and recommended **concussion** as a means of eradicating yellow fever from the city. He was granted permission to put his theory to test. That same evening the city was concussed. The following account appeared in a local paper:

> **. . . About 7 P. M. there were four explosions, each of 50 pounds of powder, which had been placed in the mud near "the pond." At 8 P. M. he (Colonel Hardee) commenced firing west of Cedar Street charges of 1½ lbs. each 2 every minute. These were to be continued until sunrise. The smoke created was very dense, and the Colonel feels happy over the result of his experiment, and believes that there will be no more yellow fever cases here.**

Soon after the announcement of yellow fever in Jacksonville, Mr. George E. Jordan of the Florida Minstrels caught the spirit of the occasion. To the air of "On the Road to Brighton" he sang the following song:

Don't ax me to stop for nuffin! I'se guine aboard de boat;
See how my eyes are sticking out; my heart's clar up my froat;
I've seen a heap 'truble,' boys, in dis sad world ob care,
But nuffin had I seen to match this yallar fever scare.

Chorus: It's mighty curious, somehow, but den it am a fac
Dat dis yer whole community wid crazy folks am packed;
Dey trembles at a whisper, kaze dey smells it in de air
And guine de odder side of Jordan, on a yallar fever scare.

De Mayor's proclamation didn't do a bit of good
Kase all de oldest citizens was breakin for de woods;
You neber seed so many folkses at the Duval County Fair,
As run aboard de steamboats in the yallar fever scare.

You done orter seen de plunder packed out dar on de wharf
Belonging to de folkses dat was guine for de Norf!
In Florida 'de lan ob Flowers,' dey claimed a mighty share
But der stock, you see, was all for sale—in der yallar fever scare.

On November 23, with many uninspired statements, there appeared in a local paper under "Stray Notes" the following astute and most pertinent observation:

There are several resident mosquitoes that did not refugee.

Thursday, November 29, was Thanksgiving Day. Then indeed the people of Jacksonville had reason to give thanks, for on that day the weather grew cold, during the night the temperature continued to fall, and on the following morning there was a freeze—a clearcut, health-restoring, longed for and most welcome freeze.*

On Saturday morning, December 1, an editorial appeared in a Jacksonville paper which preserves admirably the local color and spirit of the occasion. Reproduction of the editorial here, with all its articulateness, seems appropriate:

THE FREEZE

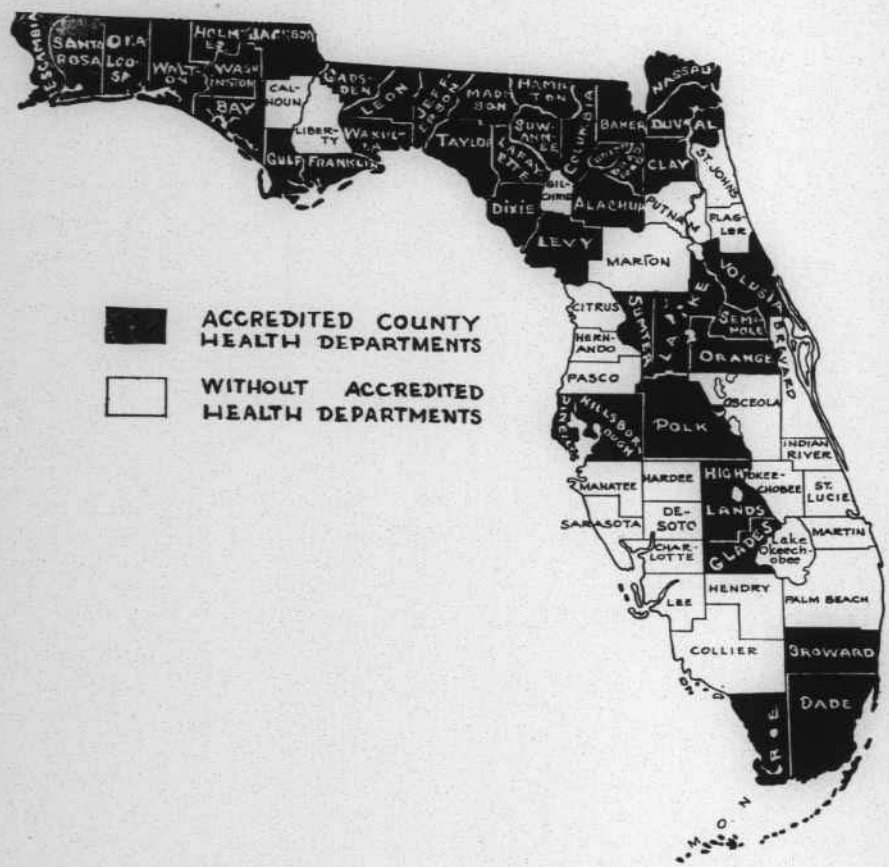
No happier smiles ever illumined the faces around a Christmas table than shone Friday morning upon the countenance of everybody in town. Bay Street was astir bright and early, the boys pulled down the store shutters with a brisk vim, every shopkeeper stepped cheerily along the sidewalks; even the horses and wagons, omnibuses and mule carts dashed along the hardened ground with exhilarating impetus, and people greeted each other with hearty congratulations and a jolly "good morning." There was an infection of joy all over the city. The hotels, hitherto dreary and so silent and yearning for the winter travel, ran up their gay flags and pennants. Looking over the (St. Johns) river the water sparkled and rippled in the clear, crisp, cold morning air. For the first time people are today wearing warm overcoats, and wives and maids are frisking about the stores,

**No one at this time, apparently, had any justified suspicion that mosquitoes were vector of yellow fever. This was before the experiments in Cuba of Carlos Finlay, who later was dubbed queer and impractical. It was not until 1900, twenty-three years later, that the mosquito was identified as the agent which spreads the disease.*

with a crimson bloom on their cheeks, half muffled in shawls and comforters. The great glass windows of the fashionable shops fairly glistened this morning like mirrors, as we strided down Bay Street, at an early hour, with fingers tingling in the sharp air . . . There is no doubt about it. It was a freeze. The cold, dry air of yesterday blowing from the west and northwest had dried up all moisture, and there was therefore, no appearance of frost; but wherever there happened to be any moisture in the soil it was frozen to ice . . . The signal office reported that the mercury went down to 31 degrees . . . At the Windsor Hotel the thermometer showed 28 degrees about 7 o'clock. At the St. James, Mr. Campbell reports his instrument at 31 degrees early this morning. At any rate it was cold—shivering cold—and the bright lightwood fires in one's breakfast room gave a most cheerful and agreeable glow to the domestic interior. Cocktails, that insidious appetizer, were in eager demand from the very break of day, and some of our citizens, conscientious ones, who regard a liquor shop to be worse than a yellow fever epidemic, were observed slyly emerging from Togni's and Farenbach's—at the two extremes of Bay Street—out of the way of the most busy centre, fearing to boldly enter Lord Lyman's palatial resort in the broad gaze of a crowded thoroughfare. Better than all, the Duval County Medical Society are in a condition of Endemic ecstatics. They are rejoiced that their conscientious scruples will trouble them no more. Mr. Eells, who is himself the board of health, the inventor of the proclamations, was rosy with delight this morning, and is preparing a manifesto for tomorrow crowded with exultation; and it is pleasant after all. Pipesmokers may now fill up with a general relish, and Tom McMurray may drive his double best the whole length of Bay Street on a dead run and he shant be molested with a fine. Welcome home the . . . penitent prodigals. Let the air ring with shouts, for "Johnny Comes Marching Home."

The number of cases of yellow fever in Jacksonville approximated 150, but the actual number of deaths during this period is unknown. In reality, Jacksonville suffered much less than Fernandina. That city was visited by a true holocaust, while in Jacksonville **the outstanding feature of the epidemic was the disruption of all organized activity due to fright and panic.** After the freeze, resumption of business as usual was accomplished in a short time. The residents, however, had learned their lesson and immediately set out to make major sanitary improvements.

STATE OF FLORIDA



Florida **HEALTH NOTES**

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CHILD HEALTH

The State Board of Health

Hon. Millard F. Caldwell
Governor of Florida

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Florida HEALTH NOTES

ESTABLISHED 1890

UNFINISHED BUSINESS

LUCILE J. MARSH, M. D., *Director,*
Bureau of Maternal & Child Health

Perhaps there is an irreducible minimum for some causes of infant mortality below which we cannot hope to go. Some of the deaths, particularly those occurring in the first few days of life, cannot be prevented by our present knowledge. When we reach the irreducible minimum, we can ease up on our efforts.

That we are still a long way from any such point is easily seen by the study of a few figures. In 1944 Florida lost 42.9 babies out of every 1,000 born alive. In all of the United States that year 39.4 babies died out of every 1,000 born. In 1945 Florida lost 41.1 babies per 1,000. Our infant mortality rate is going down but it does not approach the irreducible minimum.

Deaths from the preventable diseases have decreased during the past twenty years. But there were forty-one deaths from diphtheria during 1944. As long as there are infants who have such diseases as diphtheria, whooping cough or tuberculosis, the job is unfinished. Parental education as to the value of protective immunization and other preventive measures, is one phase of the attack and is far from complete. The availability of such preventive measures to every infant in the State is a goal still to be attained.

The severe diarrheal diseases of infancy that caused such havoc a decade ago are disappearing. Florida has escaped so far the epidemic diarrhea of the new born. Improvements in the safety of milk and water supply are helping the food borne diseases toward oblivion. But there remains much to be done in providing safe drinking water and milk for every home in Florida. After pure water and milk reach the home, the mothers must know how to keep their food from spoilage and contamination.

The provision of better prenatal care for every expectant mother will help to save in good health some of the babies who die or are crippled because of some condition of the mother. The

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early diagnosis of syphilis will save many useful lives. The same early diagnosis and treatment of other deleterious condition of the mother as hookworm, anemia and early toxemia will help many babies to be well born. Finding a small pelvis or placenta praevia or some other situation that could jeopardize the baby early enough to take proper care of the mother and baby will probably mean the difference between life and death to the baby.

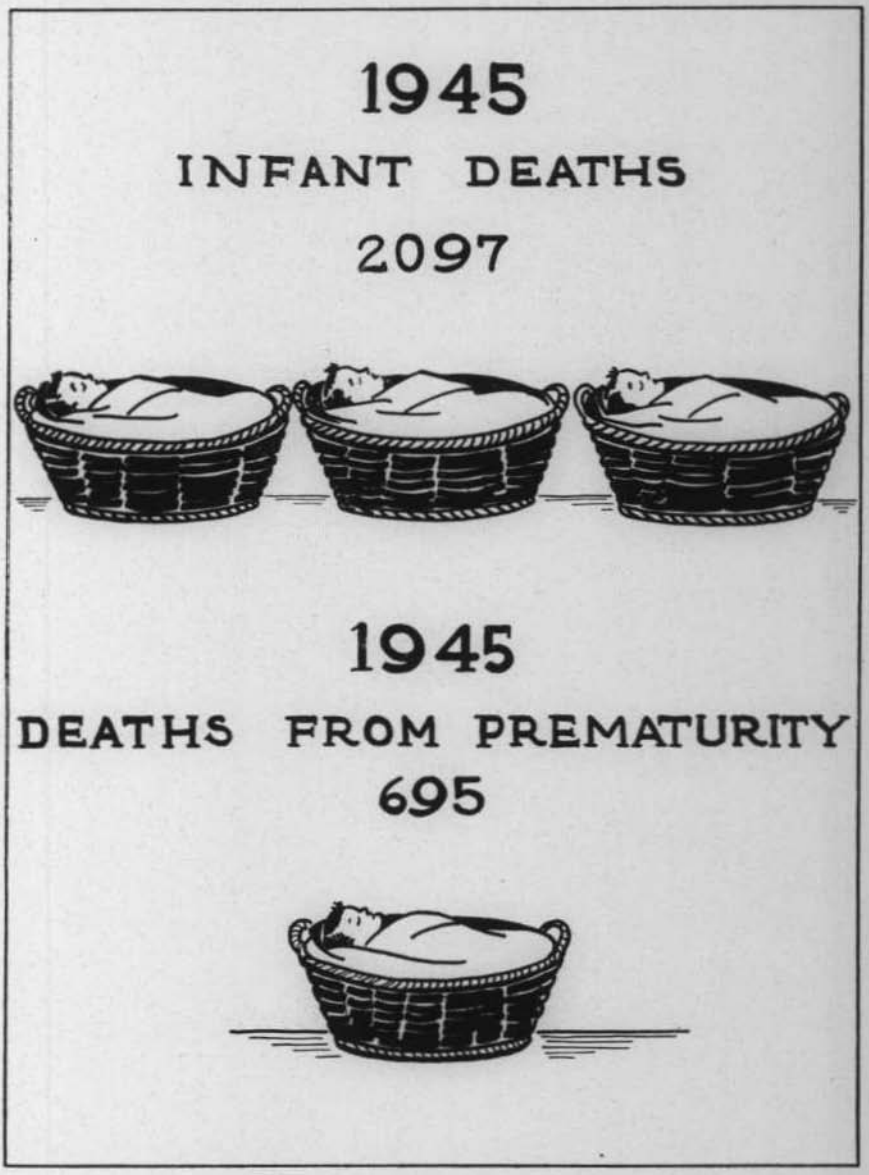
By all odds, prematurity is our gravest danger to babies. A third of the infants who died in 1945, died because of prematurity. Some of these belong, according to our present state of knowledge, to the irreducible minimum. They have defects within themselves that possibly caused their premature birth and certainly make it virtually impossible for them to survive. The greater number of the premature babies can be saved by early medical and nursing care. A vigorous effort is now under way to provide more and better facilities in the way of hospital and public health nursing aid for the physician to use in his struggle to save these infants who come into the world too soon. The provision of incubators for the home and in the hospitals is only the first step of the program. Incubators do not run themselves. A physician can do more good with a homemade incubator and a well trained nurse than he can with a busy or careless nurse with the very latest incubator with all the gadgets. Instruction of nurses in the most approved method of care for the prematures shoud assist them either in caring for them in the hospital or in the home as necessary. The establishment of centers for the care of prematures in strategic locations in the State is under way. Carriers to take the babies to the hospital safely will be provided. Public health nurses to help show the mother how to care for the baby after it returns from the hospital are already at work.

The proper care and feeding of babies to keep them in the best possible condition will do much to help our coming generation to grow up strong and well.

Progress in lowering the infant mortality from this point on will probably be less spectacular than it has been in the past. The bg job of sanitation, the discovery of the sulfa drugs, the use of preventive immunization have done their part. Not that there is not much still to do in each line, but that there will be a gradual extension of medical knowledge and application. This process, the most effective, is rarely spectacular.

It is not enough to save the lives of our babies. We need to make these lives as useful as possible. In order to do this, we need to try and see to it that the babies are well born, well cared for, well fed and protected from all preventable disaster.

In order to make progress toward such a goal, there must be a close working relationship of mutual understanding and esteem between all individuals and agencies with contributions to make. Each of us can do something the other person cannot, but no one of us can do the job alone. We need to work together more closely than ever to clean up the unfinished business.

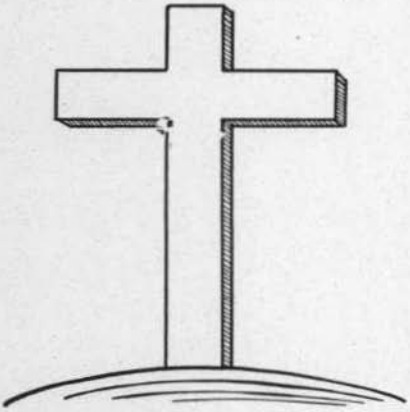


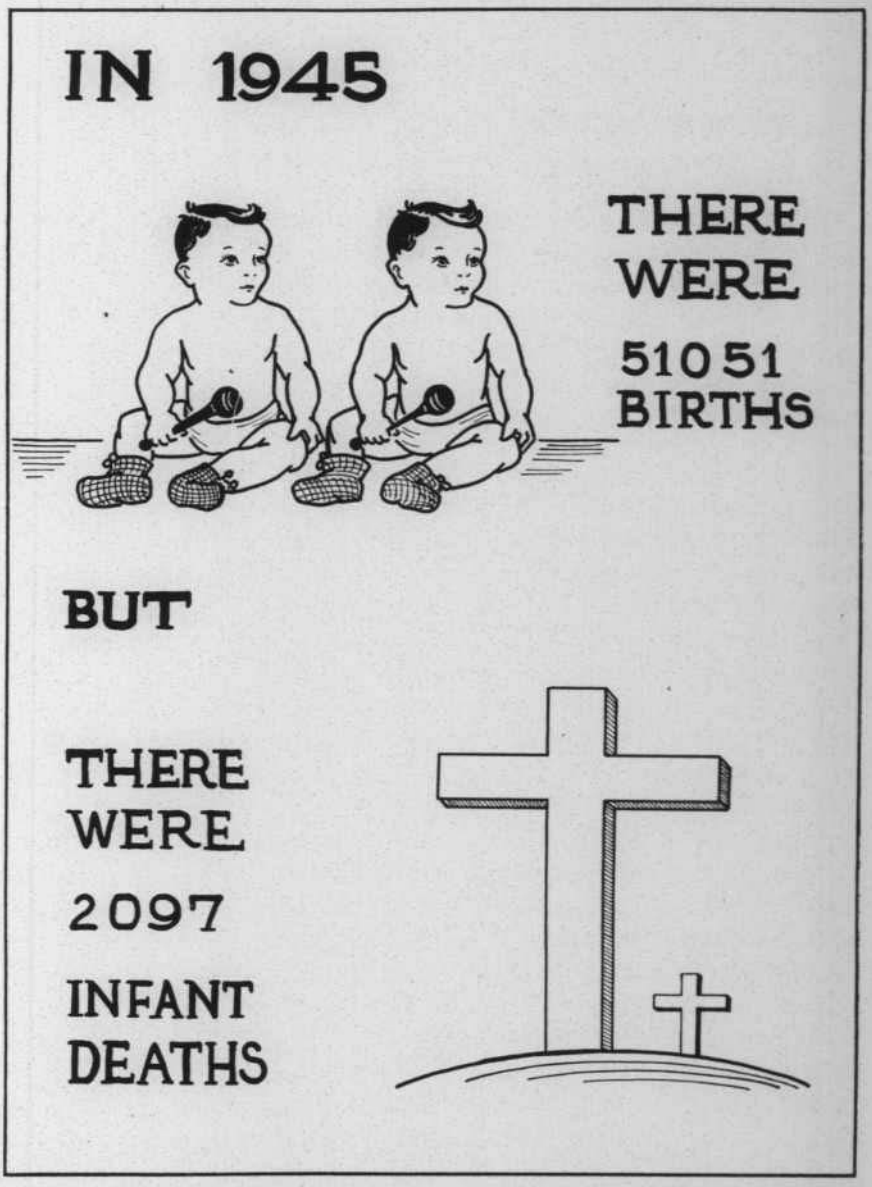
IN 1935

THERE WERE 28058 BIRTHS

AND

THERE WERE 1730 INFANT DEATHS





The large cross above represents infant deaths in Florida for 1935, while the small one in the background tells the gratifying story of one-fifth reduction in similar deaths for 1945.

FLORIDA STUDY OF CHILD HEALTH SERVICES

WARREN W. QUILLIAN, M. D., *Chairman Region II*
American Academy of Pediatrics Coral Gables, Fla.

In an address to Congress last year, the late President Roosevelt mentioned among the "certain rights which ought to be assured to every American citizen, the right to adequate medical care and the opportunity to achieve and enjoy good health." The American Academy of Pediatrics in 1944 adopted a plan to make a survey of the needs of children of the United States and the facilities available to meet these needs.

Many organizations outside the ranks of practicing physicians have been quoting figures and making a variety of recommendations relative to the regulation of medical practice. Academy organization was completed, and the initial Study was inaugurated in October (1945) in the State of North Carolina. Primarily, the effort is a fact finding study undertaken by physicians to learn their strong and weak points. Material obtained from the North Carolina study is now being classified in order to afford the practicing physicians opportunity to determine their needs. Similar programs are in various stages of progress throughout the country. Under the able leadership of Dr. George L. Cook (Tampa), State Chairman, and Miss Stella Lackey, Executive Secretary, the Florida Study of Child Health Services has been undertaken and is still under way. This project has been formally approved by the Florida Medical Association, the Florida Pediatric Society, the State Board of Health, the National Foundation of Infantile Paralysis and the Florida Hospital Association. It was endorsed by the Tuberculosis Association, the State Welfare Board and other agencies. Much credit for the success to date has been due to the generous contribution of time, effort and financial backing of the State Department of Health and the Florida Chapter of the National Foundation of Infantile Paralysis. Administrative details have been tremendous but the enthusiasm and zeal of those who have undertaken this responsibility have been equal to the task.

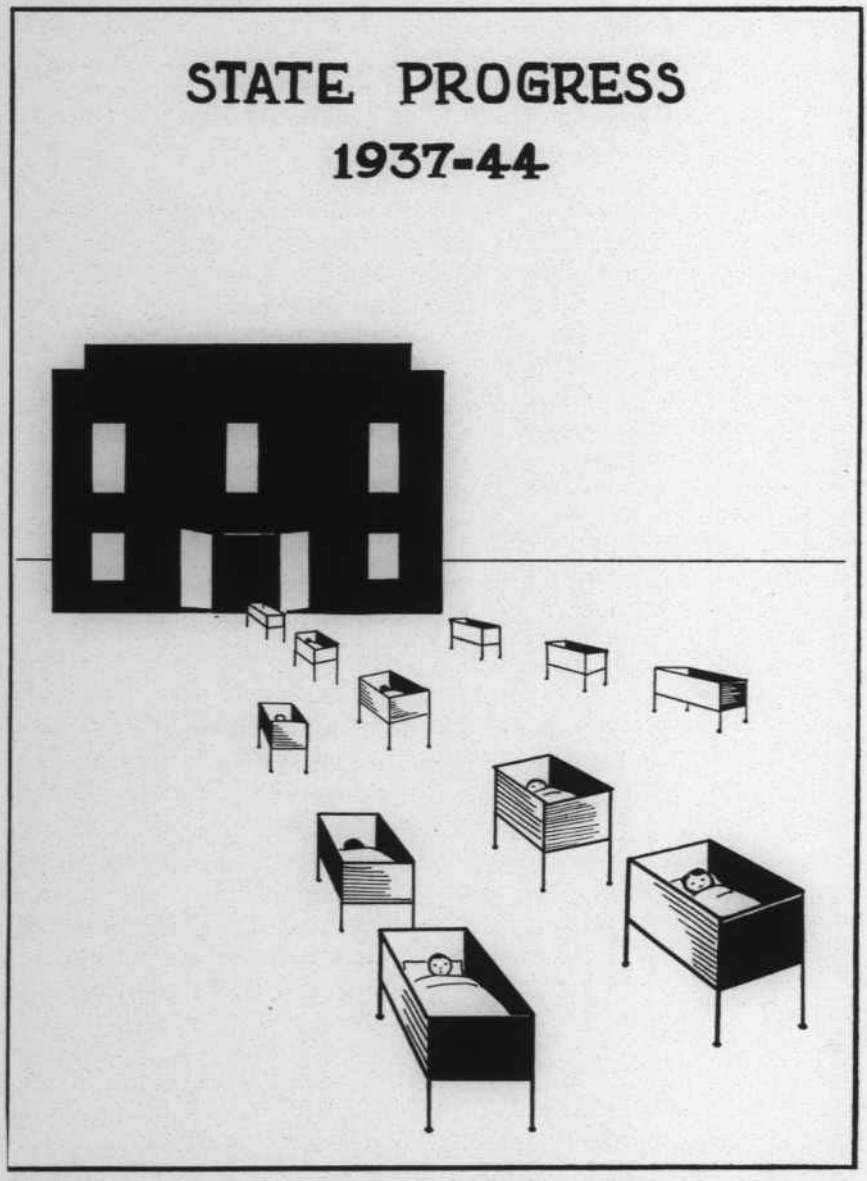
Four major fields of investigation are included in this study:

1. General health services.
2. Qualification, distribution and activities of professional personnel.
3. Hospital facilities.
4. Pediatric education.

Only a small proportion of the medical care rendered to children in this country is provided by those physicians who limit their practice to pediatrics. Consequently, it is most important in this fact-finding survey to determinne accurately from the general practitioner and others the extent of that portion of their practice devoted to child care. Ultimate success of the effort depends upon each individual from whom information is requested. Evaluation of the status of existing health facilities for children, the integration of this data from each State will be of considerable practical use later by the physicians of the State. Betterment of existing conditions can be accomplished intelligently on the basis of factual data. Every practicing physician bears a responsibility to cooperate in this effort. The future health and well-being of America's children should depend upon the physicians who are the providers and ministers of medical care.

The achievements in medicine during the past twenty years are just part of a general advance in science. They parallel those in chemistry and physics. But the advances in medical knowledge have created new needs and possibilities.

As intelligent physicians we must accept the challenge and implications of progress by offering some constructive effort and planning to make medical care adequate. The success of the Florida Study of Child Health Services depends upon each one of us. Future planning must be based on accurate information obtained by methods such as those employed in the present study. The program has been developed in order to make available preventive, diagnostic and therapeutic medical service of such quality that the children of this country may have every opportunity to "acheve and enjoy good health." Unless the physicians assume the responsibility of planning for this type of medical care, it is apparent that others less qualified will do so.



In 1944 there was an increase of 127 percent of babies born in hospitals as compared with 1937.

BUT

9297 BABIES WERE BORN WITHOUT A DOCTOR

1935
INFANT DEATH RATES

50
White Babies

88
Colored Babies

1945

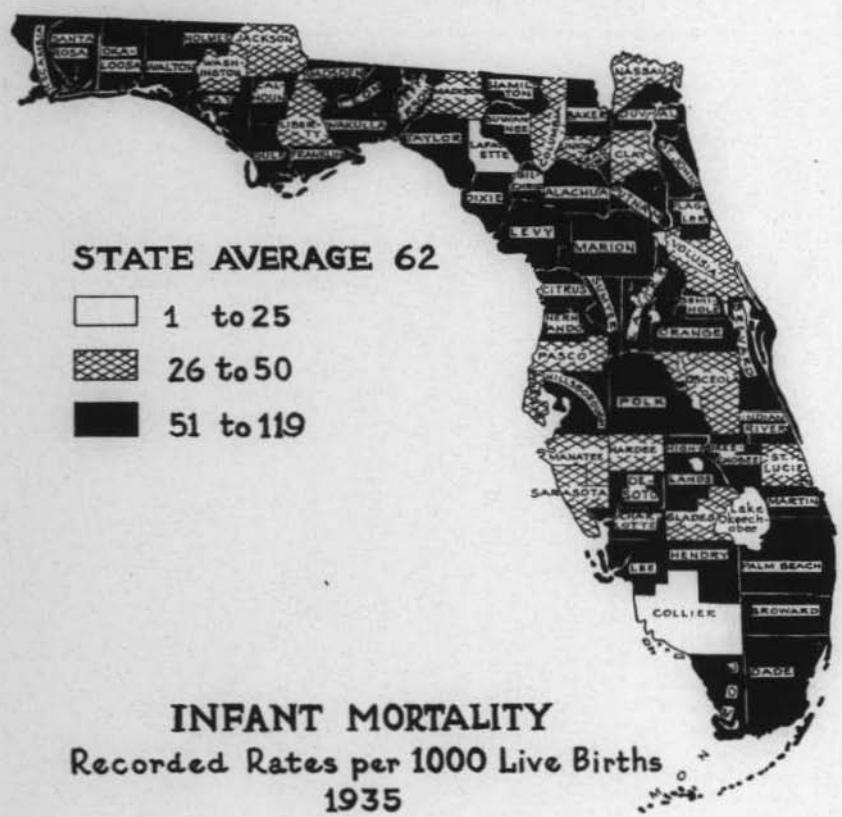
34.5
White Babies

61.1
Colored Babies

380 children died in Florida during the past five years from DIPHTHERIA and WHOOPING COUGH—virtually every one of which could have been saved had their parents taken advantage of available immunization measures. Yet in the every day hurry of living no outcry of indignation was heard against this needless sacrifice of the State's young citizens.

The indignation of every civilized person was voiced when the Nazis slew the men of Lidice and drove away the women and children. The apalling loss of child-life in the little village was deplored by every parent—yet here at home complacency toward immunization was taking an even greater toll among their own children.

STATE OF FLORIDA

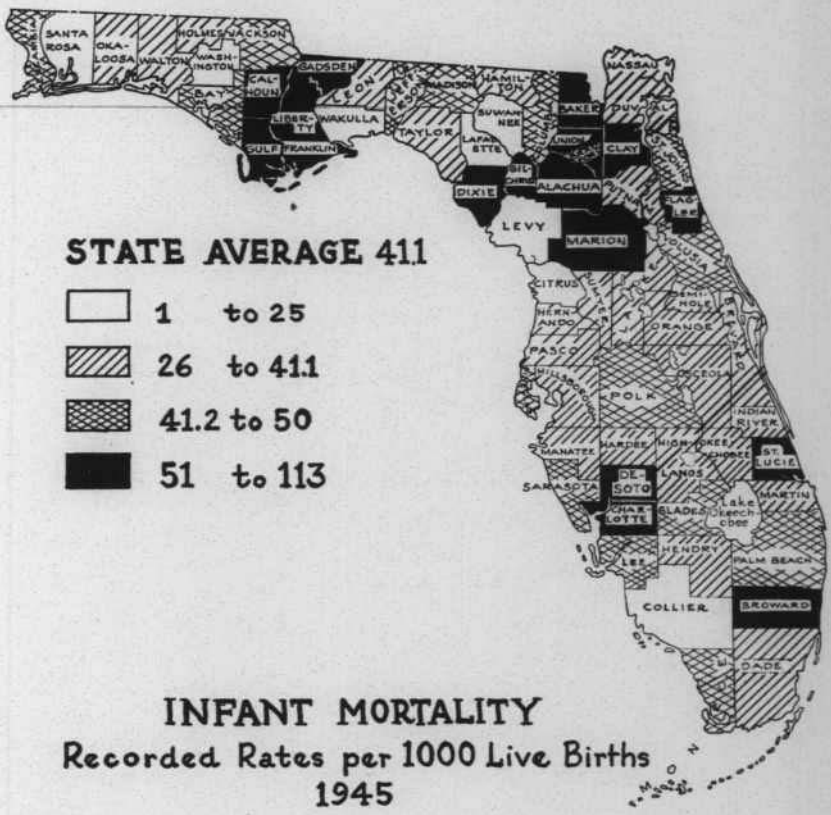


INFANT MORTALITY

Recorded Rates per 1000 Live Births

1935

STATE OF FLORIDA



STATE AVERAGE 41.1

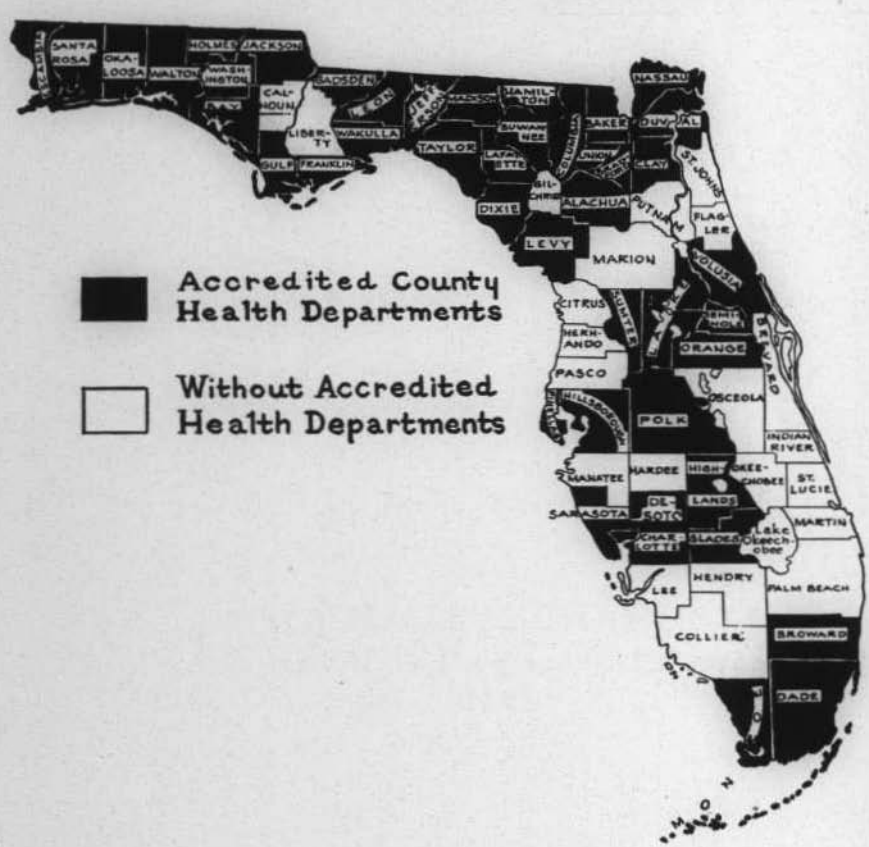
	1 to 25
	26 to 41.1
	41.2 to 50
	51 to 113

INFANT MORTALITY

Recorded Rates per 1000 Live Births

1945

STATE OF FLORIDA



Florida **HEALTH NOTES**

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TUBERCULOSIS

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Florida HEALTH NOTES

ESTABLISHED 1890

The Tuberculosis Problem in Florida and Steps Now Being Taken to Meet the Problem

C. M. SHARP, M. D., *Director*
Bureau of Tuberculosis Control

Tuberculosis still remains the most serious infectious disease in the United States. Available figures in a special mortality study for the United States between the years 1939 and 1941 show that 2,793 individuals died from tuberculosis during the three year period in Florida or an average of 931 deaths for each year. It will also be noted that between the ages of 18 and 40, the most productive age period, tuberculosis is the first cause of death among all diseases. In evaluating mortality statistics, it should be borne in mind that for each death from tuberculosis there are at least nine cases in the general population. It can therefore be seen that during a three year period it can be conservatively estimated that there were 25,137 cases, most of whom were unknown.

The number of unknown cases of tuberculosis is well exemplified by the comparatively small number of new cases reported yearly. This clearly indicates that the number of hidden cases in the general population must run into many thousands. These cases must be found early, adequately treated and supervised in order to prevent spread of this disease to healthy people within the family and the community.

The number of unknown cases of tuberculosis among presumably well people is exemplified rather strikingly by the findings of Selective Service. During the war years all people entering the Armed Services received an x-ray of their chest, and 140,000 young men and women were discovered as having tuberculosis by routine chest x-rays at the Armed Forces Induction and Examining Station.

Since January 1942 the U. S. Public Health Service has been working in war industries to demonstrate the amount of tuber-

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culosis in the well working population by means of mass x-ray case finding among industrial workers. It is noteworthy that among three-quarters of a million workers examined 1.5 percent had positive x-ray findings characteristic of tuberculosis. But another very noteworthy fact is that 64 percent had early tuberculosis that could be quickly arrested. This is a far cry from the present knowledge of the amount of tuberculosis, because if we wait for a person to see a doctor of his own accord because symptoms have developed only about 10 to 15 percent will have the disease in the early stage.

In **Florida,** for several years mass case finding has been conducted by only one mobile x-ray unit available for the entire state. The above findings are fairly well corroborated in Florida. It is obvious that many cases of hidden tuberculosis are present in the state that will eventually turn into far-advanced cases of the disease where the prognosis is extremely poor. It is therefore one of the primary objectives of an active tuberculosis control program to find as many of the early cases of tuberculosis as possible in the state, and it is believed with an intensified tuberculosis case-finding program, such as has been outlined by the Bureau of Tuberculosis, the majority of these cases can be found. It does require, however, a great deal of understanding and cooperation on the part of the public, the medical profession as well as the local health departments to achieve this goal.

One of the fundamental principles in public health is that any state organization should work through local health department since it is obviously impossible for one to remain in a state office and carry on an adequate Tuberculosis Control Program.

We might say the purpose of the program of the Bureau of Tuberculosis is three-fold:

(1) To render direct service to the people examined and studied, as well as to their families and communities in which they reside;

(2) To acquire current data concerning the clinical problem by the establishment and maintenance of adequate central case registers;

(3) To educate the public in matters pertaining to Tuberculosis Control.

Mass Case Finding

One of the principal activities of the Bureau of Tuberculosis Control will be the expansion of the mass case-finding surveys

throughout the state. The State Board of Health now has available three x-ray units mounted in busses, two of which have their own generating equipment. This makes it possible to go to any community regardless of the size and do mass x-ray studies on the general population. Instead of doing spot surveys such as have been done so frequently in the past, concentration is being made on community wide surveys.

The new radiographic equipment has made available one of the most important diagnostic aids we have in tuberculosis control. In fact, these diagnostic x-ray survey units have practically revolutionized tuberculosis control in that we are able to demonstrate tuberculosis in its pre-symptomatic stage where recovery from this disease is excellent. By mass x-ray examination on well population groups we are able to find approximately 65 percent of the patients in the very early stage of the disease. We, therefore, have a weapon whereby we can eradicate tuberculosis in our life time if we pursue the problem vigorously.

This type of x-ray equipment is making chest x-rays available to anyone in the general population who desires an x-ray of the chest. These x-rays are admittedly essential for the early diagnosis of tuberculosis. The finding of cases early is acknowledged as of first importance, because it improves the prognosis and reduces the spread of the infection. These essentials are now obtainable.

The new x-ray equipment is compact, and can be mounted in a trailer unit. It is semi-automatic (through the use of a photoelectric cell) and will handle as many as 150 people per hour. The records of 350 examinations are contained on a small 70 mm. film roll. This number of x-rays can be read by an experienced observer in about an hour. The approximate cost is 25 cents per individual. This simple examination is of about 98 percent reliability in detecting evidence of significant tuberculosis as compared with the usual large films. Unsatisfactory films and repeat examinations are reduced to less than one-half of one per cent, and it is not even necessary to remove clothing.

Here, then, is a diagnostic aid which costs little more than a Kahn blood test as performed in large quantities in a state laboratory. For early diagnosis, more effective therapy, and better disease control, the x-ray needs to be freely available to the physicians and people of Florida. In syphilis, the economical operation of centralized serological laboratories makes the desired serodiagnostic tests widely available. Similarly, in tuberculosis, mass surveys can make x-ray diagnosis readily available to the general public, regardless of their ability to pay. This would

serve the best interest of the physician and the patient; in addition, the public health would be protected in a manner hitherto impossible. This program is within reach; the interest of practicing physicians and health officers can make it a reality.

In addition to the mobile x-ray unit, permanent survey equipment will be made available to two of the larger health departments located in Tampa and Miami, and on the Hospital Ship in Jacksonville where routine x-rays will be taken on all admissions. It is expected that as many as one-half million x-rays a year can be done with these units if we have the full cooperation of the communities, where surveys are being performed. This will mean that approximately 35 percent of the adult population of Florida can be examined each year with this equipment and by doing this we can certainly uncover a tremendous amount of hidden tuberculosis.

Tuberculosis Record Systems

A knowledge of the extent and scope of the disease problem in a community is essential to the health officer in preparing an adequate program.

*"Recent acceleration in tuberculosis control activities in state and local health departments has been largely motivated by mass radiography in case finding. The widepread application of small-film technique has discovered more active, subclinical, and suspicious pulmonary tuberculosis than has ever been detected before in the history of public health. Even a casual survey of the majority of local programs reveals that quality and quantity of case finding have far surpassed the basic follow-up and case holding of newly discovered tuberculosis.

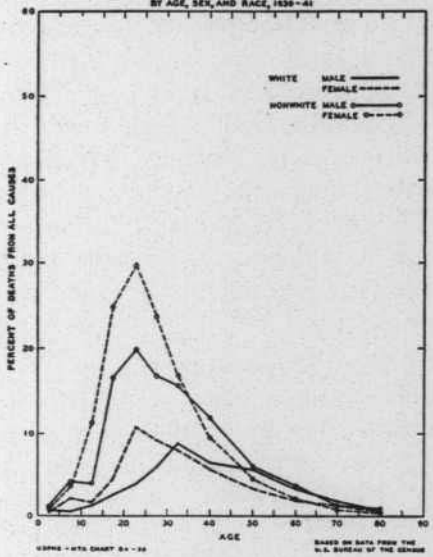
Simple and efficient tuberculosis record systems that are planned to meet local needs are fundamental to good follow-up procedures. They facilitate a maximum utilization of limited clinical, laboratory, and field nursing services. To correlate all phases of tuberculosis control, to bring about an equitable distribution of professional services, there exists an urgent need for extensive record systems based upon defined requirements. Even individual case management is hampered by the inadequacy of existing records.

With the rapid expansion of local, state and federal activities, local registers and record systems have assumed additional significance. In a local area with an established tuberculosis control program, a case register has repeatedly been recommended for case management, for current inventory of the case load, for inter-

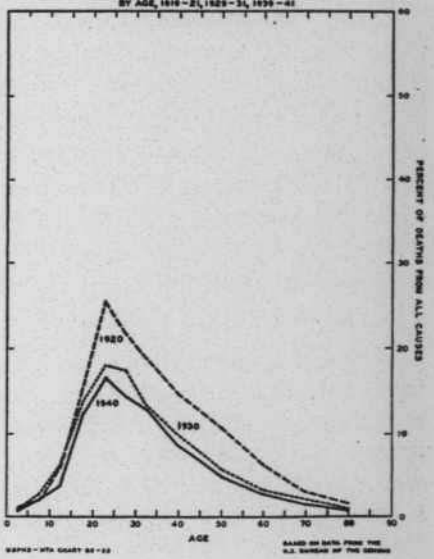
*Public Health Reports, Vol. 61; May 3, 1946.

FLORIDA

DEATHS FROM TUBERCULOSIS (ALL FORMS) AS PERCENTAGES OF DEATHS FROM ALL CAUSES
BY AGE, SEX, AND RACE, 1939–41

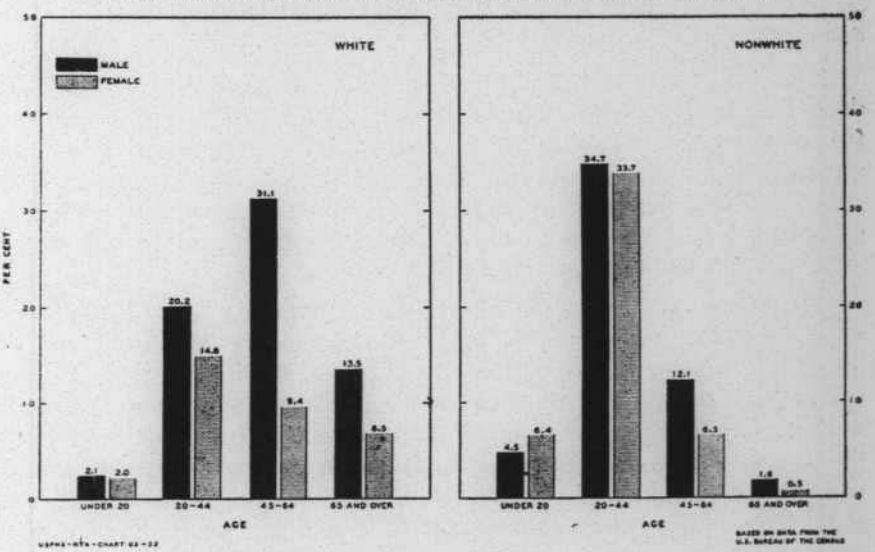


DEATHS FROM TUBERCULOSIS (ALL FORMS) AS PERCENTAGES OF DEATHS FROM ALL CAUSES
BY AGE, 1910–21, 1929–31, 1939–41



FLORIDA

TUBERCULOSIS DEATHS BY AGE AND BY SEX
PERCENTAGE DISTRIBUTION FOR WHITE AND FOR NONWHITE, 1939–41
TUBERCULOSIS DEATHS IN EACH AGE–SEX GROUP SHOWN AS A PERCENTAGE OF ALL TUBERCULOSIS DEATHS IN EACH RACIAL GROUP



val evaluation of the effectiveness of activities in relation to their cost, and for a realistic knowledge of the extent of the problem.

Now that state and local health departments are launching state, county and city projects to find cases and to give medical supervision to ambulant persons, tuberculosis record systems and coordinated local registers become essential, if the full benefits of any new program are to be experienced. Inefficient record systems will encumber and defeat the most promising of tuberculosis control programs. However, smoothly functioning record systems, even though they precede necessary services, may well be the essential administrative tool needed for the development and eventual success of the program.

Local registers are especially useful in individual case management. State tuberculosis record systems that contain summarized information from local sources are essential in program supervision, planning, and evaluation. Semi-annual or annual compilation of uniform data from the state health departments makes possible a concise and current national summary of the extent and results of case finding, the ultimate disposition of cases discovered, and the trends in morbidity and mortalty. In addition, such a summary presents an opportunity to base long-range planning on predictions derived from analyses of reliable data. Comparisons of state records can easily be made and, as areas of great need become apparent, additional funds and personnel can be concentrated in any given community before irreparable damage to public health is done.

The tuberculosis services of a health department cannot be described by statistics alone. However, a combination of meaningful statistical summary and professional description of nonquantitative tuberculosis activities can supply the best answers to the administrator who must justify his health program in terms of protection of the community, extent of the problem, effectiveness of all activities, and funds expended.

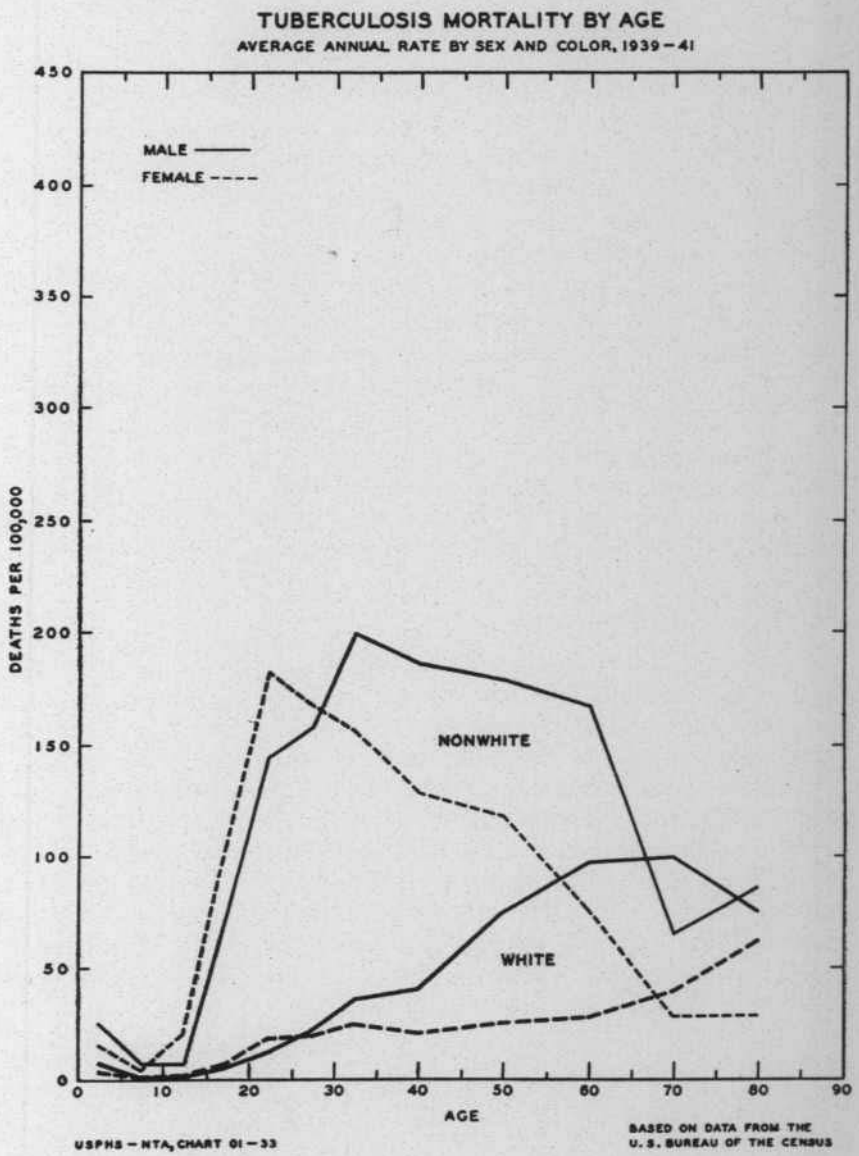
Well-planned and effective record systems can make the practice of public health, as applied to tuberculosis control, really a science and not just empirical guesswork. Many questions in the epidemiology of tuberculosis remain unsolved. They require solution before eradication of the disease can be realized in a measurable time. Better records, and time for their analysis, could reduce the number of past mistakes and enable us to determine if what we have proposed and carried out has accomplished the desired end."

Record consultants are available by the Bureau of Tuberculosis to establish local registers and to train local personnel in the mechanics of operation.

Post Survey Service

Control of tuberculosis is not accomplished by mass x-ray surveys alone. This procedure merely earmarks numerous

FLORIDA



individuals for careful investigation, study, and, in many cases, treatment. The real work must then begin. Plans for this follow-up work must be outlined in advance and based on known percentages from previous statistical studies. The system utilized for follow-up in this state at the present time, as in most states, is far from being a perfect organization. In the first place, the equipment for adequate follow-up and personnel shortages, both nursing and medical, in local health departments have proved in almost all instances to be a great handicap in doing the necessary follow-up.

It must be realized by all concerned that a tremendous increase in the burden of the local health department of necessity is brought about by the demonstration of a large amount of tuberculosis in any community. This should always be first in our mind in considering follow-up procedures.

The Bureau of Tuberculosis Control has, therefore, established a series of permanent clinics located in 15 of the larger counties with full-time health departments. These clinics are not all in operation since the shortage of equipment and personnel have hindered the operation to a marked extent. It is hoped by the first of the year that they will all be placed in operation.

In addition to the permanent clinics, clinicians are available to the organized health departments to hold routine clinics following x-ray surveys in a given community. The method of operation of these clinics will be discussed in another article in this issue of Health Notes.

Hospitalization of Patients

Fortunately, an expansion of tuberculosis hospital facilities for the state has been started under the able direction of the superintendent of the Tuberculosis Sanatoria. In most instances, active cases of tuberculosis found in these surveys which have been followed-up in our clinics have been rapidly admitted to the State Tuberculosis Sanatoria. This represents a continuity of service—cases being found by the State Board of Health survey unit will be followed-up by the clinicians of the State Board of Health and transferred to the State Tuberculosis Sanatoria for treatment, and when they are discharged from the State Tuberculosis Sanatoria they will be referred back to the health department for follow-up and supervision.

As previously mentioned, adequate funds are available at the present time for inaugurating a program of this character, but it is already obvious that the program will develop far beyond the

means available to the State Board of Health at the present time for tuberculosis control. As programs develop on a local level more funds will be needed by the county health departments for this purpose. At the present time, the entire tuberculosis control program of the Florida State Board of Health is financed by federal funds, and it would be foolhardy if we continue to depend upon the Federal Government for sufficient appropriations to operate an expanding service. More full-time tuberculosis clinicians, public health nurses, and funds for operation are going to be needed if the program expands, as anticipated, and it is the sincere hope that the Legislature will see fit to appropriate sufficient funds for the operation of this service.

TUBERCULOSIS CLINICS

MILLARD JEFFREY, M. D., *Director of Clinics*
Bureau of Tuberculosis Control
Florida State Board of Health

After the complex and very necessary organization for an x-ray survey in any community has been made and the actual survey begun, the most important single factor in this service is the follow-up of the patients demonstrated to have tuberculosis or who are suspicious of tuberculosis found in these mass x-ray surveys. If we are doing an x-ray survey to demonstrate a large amount of tuberculosis in any given community, nothing has been accomplished from a public health standpoint since nothing has been done to aid the patient or the community in controlling the disease problem that has been demonstrated. It has been said many times that we have a tool with small x-ray film service with which tuberculosis eventually could be eradicated. However, that statement presupposes that adequate follow-up will be done on all patients in the survey.

The principal source of new cases, however, will continue to be found among the family members of known cases and persons recently dead of tuberculosis; that is among household associates exposed to active cases in the home. Tuberculosis is a family epidemic so it naturally follows that we must seek undiscovered cases of the disease in the family group.

As a result, one major innovation to the rapidly expanding program of the Bureau of Tuberculosis of the State Board of Health is that of traveling tuberculosis clinics. This was begun in July and has shown marked expansion since that time.

The Bureau of Tuberculosis feels that due to the scarcity of clinicians trained in the field of tuberculosis many of the smaller communities would fail to reap the benefit of the expanding case-finding program in tuberculosis due to the fact that the trained personnel were not within easy traveling distance of tuberculosis patients.

Therefore, it was felt that the trained clinician should be brought to the patient in the smaller community to assist: (1) in the follow-up work on positive cases found in mass surveys; (2) in following-up old patients; and (3) in certain diagnostic problems that present themselves. It was also felt that with the increasing load carried by the sanatoria in the State of Florida, the burden of out-patient work and post-sanatorium follow-up could be lifted from the overworked staff of the tuberculosis sanatoria.

The technique of arranging schedules of clinic dates, in coordination with local health department clinics, and within the means of transportation, of course met with considerable difficulties, but most of these are gradually being ironed out to make a smooth working schedule.

The traveling team consists of a trained tuberculosis consultant nurse, an x-ray technician with a portable 14x17 x-ray unit easily transported, and capable of taking diagnostic chest x-rays, and a tuberculosis clinician, a physician well-versed in chest x-ray interpretation, therapeutics in tuberculosis, and familiar with procedures of sanatorium care. These three individuals visit the community in the order named with about two weeks interval between each one.

The consultant nurse reviews with local personnel the tuberculosis case records and decides with their help which patients and contacts should be brought in for investigation and follow-up. Cases found on mass x-ray surveys are to be re-examined. Known cases of tuberculosis, including discharges from sanatoria, are to be reviewed to see if their disease processes have remained arrested. Contacts of known cases, and cases suspected of having tuberculosis, are to be investigated. The local health officer has several weeks to let some of the local physicians know of the expected visit of this portable x-ray machine, if they would wish to have some of their own patients in for chest x-ray in certain diagnostic problems.

The technician is able to take between 75 and 100 films at each clinic. Due to the inability to set up developing facilities in so many rural areas the technician then carefully covers and packs all exposed x-rays in light-proof containers and mails them to the main office of the Bureau of Tuberculosis in Jacksonville where they are then developed and interpreted by physicians trained in the field of chest x-ray interpretations and clinical tuberculosis.

The County Health Department, where these films were taken, is notified within a week concerning the presence or absence of any pathology on the films seen. A complete list of patients and their diagnosis is then returned to the county, and in approximately two weeks, the clinician then appears in the county with the positive x-ray films, his own view box, and all records to see the patients whose films showed evidence of pathology. All available medical data, including previous x-ray films and laboratory reports, is made accessible to him. Wherever possible a decision is made on each patient as to their exact status, and the stage of the disease, whether sanatorium care is necessary, or what pro-

cedure should be carried out in the home. Any other medical advice is given the patient that is appropriate to the occasion.

A further step towards more accurate investigation has recently been instituted by the clinician in these clinics. In certain types of patients with tuberculosis, there is an inability to raise sputum for laboratory study. The presence of the tubercle bacillus is often the only indication of activity of a lesion that seems to be inactive on the x-ray. In some cases, finding the bacillus, will clinch the diagnosis in suspected cases. Therefore, a new method has been employed in the search for the organism. The clinician does a direct smear from the patient's larynx and inserts the swab directly on laboratory culture media, which is then returned to the laboratory in Jacksonville for incubation. This method has been scientifically tested and proven more sensitive than the routine sputum tests done heretofore. More details of this method will be given elsewhere in this publication.

On his return to Jacksonville, the clinician carefully files all films that he has taken with him and they are used for permanent records, both for immediate and long-term follow-up. He then checks with the record analysts in charge of the tuberculosis case register so as to make known to them current status of patients in the register.

It is the hope of the Bureau of Tuberculosis that every county in the State of Florida will avail itself of the clinic service which has been offered to its people for the health of the community.

The Duties of the Public Health Nurse in Tuberculosis

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Florida's accelerated tuberculosis control program offers a challenge to every public health nurse, and at the same time provides increased facilities with which to carry out an adequate program in each community. To list briefly these added services, there are (1) the new diagnostic clinics which are being made available to every community at periodic intervals. These clinics are serving to solve the problem in many communities where distance, lack of x-ray facilities and medical care have made adequate care and follow-up of patients and contacts an impossibility, (2) the added hospital facilities at Marianna and Tampa,

(3) the tuberculosis register now in the process of being established in each county, (4) the new manual, which answers most of the questions which have been puzzling public health nurses, (5) the health educators, advanced guards, in the planning for mass x-ray surveys. These and many more services are being made available. How are we, as public health nurses, going to use them?

Services on a Selective Basis

To carry out such a program it is obvious that the work to be done, and the person for whom it is to be done, must be done on a selective basis. Because the cases found vary in type, activity and significance, it is essential for the public health nurse to think of her work on the basis of **who** should receive the service, **what** service should be given, **why** it should be given, and **when** and **how** it should be given.

Evaluation of Cases

The most important factors which determine the amount of nursing supervision required by the tuberculosis patients is their classification according to the stage of the disease, clinical status and sputum status. Of these, the positive sputum cases are, by all means, the most important, and the isolation of these patients is the desired goal.

Here, our greatest problem lies in the fact that some infectious cases refuse hospital care, while others leave against advice. Unfortunately, there is no simple rule which can help us solve this problem. The factors involved are too numerous and complex to be solved by any one person. Therefore there is a definite need for a conference between the family physician, the health officer, the public health nurse, the nursing supervisor and the social, welfare and rehabilitation workers. The question of adequate isolation is of enough importance to warrant every effort toward that end.

If it were possible to have correct information at given intervals regarding the sputum of patients, the problem would be comparatively simple. But because the sputum status of a majority of non-hospitalized cases is not known, and since a varying number of these are positive cases, the group is an important one.

The nurse has two responsibilities in dealing with these patients. She should recognize the advantage to herself and to her health officer in knowing the current sputum status of these patients, and should encourage and secure sputum examinations whenever possible. The clinical status of the patient is also an important guide to supervision, both medical and nursing. Active use of the diagnostic clinics could give the nurse a current picture of each case.

Evaluation of Contacts

The examination of contacts is important in tuberculosis control because tuberculosis is a communicable disease. It is recognized that the development of tuberculosis is far greater for contacts of known cases than it is for the general population. It is unfortunate that so much time and effort has been expended on unproductive contact examination—unproductive because so little consideration has been given to the exposure to tuberculosis. The significance of a contact depends on the recency of exposure and the amount of exposure, the age of the contact and the status of the source case.

There are more cases of tuberculosis among intimate contacts of positive sputum cases of tuberculosis than among contacts of negative sputum cases. It is estimated that the prevalence of tuberculosis among these contacts is fourteen times as many as in the general population. Contacts of active cases have a higher risk than contacts of inactive cases. If the source case has advanced tuberculosis, the risk is higher than in minimal cases. Another consideration is whether or not the contact still exists, and if not, how long it has been broken. A fact that every nurse must remember is that a large majority of cases among contacts are found at the first examination, and relatively few upon subsequent examinations.

Timing of Visits

A word about the timing of visits. There is obviously a "right psychological moment." Here, the old adage to strike while the iron is hot, holds true. As pointed out by Dr. Berwyn F. Mattison, an effort should be made to bring about the desired disposition of the case, and secure the examination of the contacts as soon as possible after diagnosis. It has been observed that willingness to cooperate diminishes progressively with time.

Use of the Case Register

The visible tuberculosis case register is an indispensable tool whose function is two-fold, it is used as (1) a statistical device by both County and State Health Departments, and (2) it is used to assist with the selection of cases and contacts for whom the indicated work should be done in accordance with the principles described.

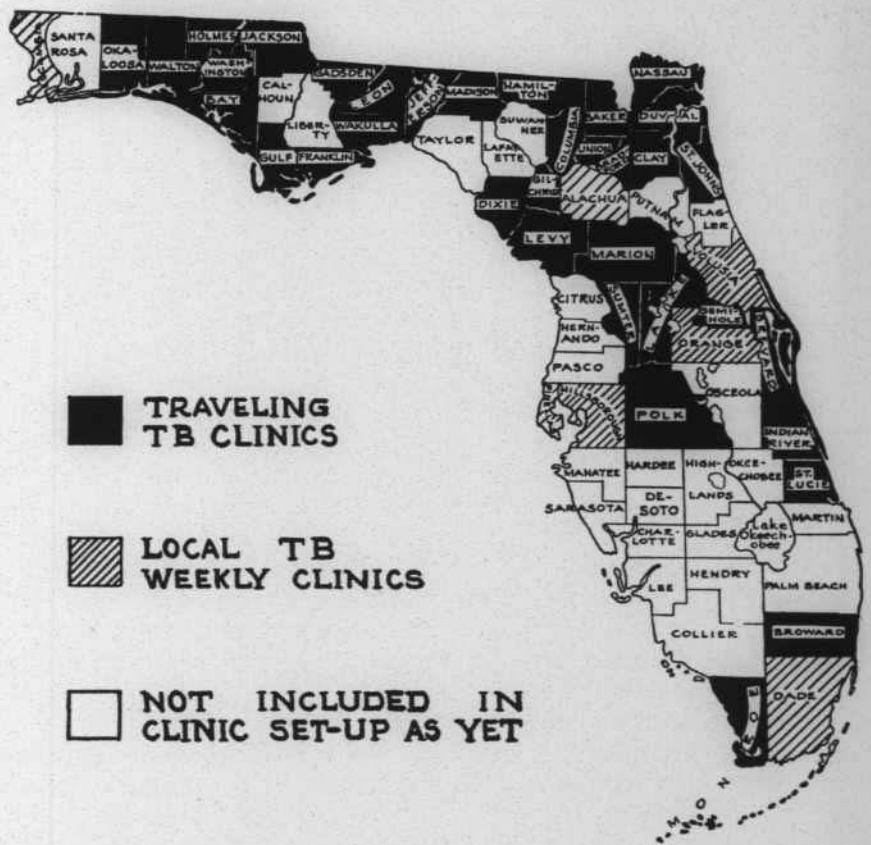
The register presents the needs of patients clearly and simply. It eliminates the possibility of patients being lost in a "blind" file, or forgotten. The patient's existence is kept constantly in the open, and the register shows at a glance whether the patient is receiving the supervision he needs. By a presentation of the specific public health needs of patients in terms of clinical and

environmental conditions, the register helps to make the work of the nurse more systematic and as a result, helps to conserve time.

A helpful method of using the register is through a case-discussion plan in which the health officer, the tuberculosis clinician, the public health nurse, and the supervising nurse, together, review individual patients from the standpoint of diagnosis, sputum status, amount and kind of supervision indicated, status of contact examinations and the social and economic problems of the family.

The mechanics of keeping the register up to date is the responsibility of the nursing supervisor, or the public health nurse and the clerk working **together**—the nurse advising the clerk of pertinent current information to be recorded on the register, such as home visits, date of next x-ray for patient and contacts, and the summarizing of x-ray reports, and other information known to the nurse. Let us make our case register work for us.

STATE OF FLORIDA



LARYNGEAL SWAB CULTURES

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During the past few months the Bureau of Tuberculosis has been interested in a different method of laboratory diagnosis. The idea of using laryngeal swabs as a means of finding the tubercle bacillus is not new. It was used in Europe as early as 1905. Interest in this procedure was aroused by E. Nassau's article as found in "The Proceedings of the Royal Society of Medicine" (London), 34: 397-40 (May 1941), where he reported on a study of two groups of patients. These patients did not expectorate at the time of examination. Of 166 patients in the first group, 37.95% had positive laryngeal swab cultures. In the second group of 107 patients, 54.2% had positive laryngeal swab cultures.

The diagnostic procedures most commonly used for the detection of the tubercle bacillus are: direct smear, concentrated smear, culture, animal innoculation of sputum or gastric washings. Laryngeal swab culture should be added to this list, it being most efficacious in patients who do not raise sputum. Its advantages over gastric washings are its simplicity, speed, and that the patient does not have any special preparation. This makes the laryngeal swab culture especially useful in our itinerant clinics where a large number of patients are seen during a short period of time. It may also be used to good advantage in patients seen in the clinic who do not expectorate. The difficulties with the uncooperative or careless patients who neglect to send their sputum specimens to the laboratory are thus eliminated. In one case examined, the clinician obtained a laryngeal swab in the home from a patient who had previously refused to cooperate in saving sputum specimens, which was found to be positive.

The technique is so simple that laryngeal swabs can be taken in a very poorly equipped clinic or in the home without difficulty. The equipment consists of: (1) sterile cotton swab on a bent wire, (2) stock bottle of 10% sulphuric acid, (3) stock bottle of 2% sodium hydroxide, (4) test tube rack with about twenty small test tubes, (5) a 10 cc. pippete, (6) an alcohol lamp, and (7) Petragnani's media slants. The swabs are taken and put through the two solutions, and the cultures planted in the clinic. The planted media slants are then sent to the laboratory. The laboratory watches for contaminants in two to four days and for the tubercle bacillus colonies in three to four weeks.

Through July and August of 1946 laryngeal swab cultures were done on 44 sputum negative patients from the State Tuber-

culosis Sanatorium at Orlando. Twelve (27.3%) of the 44 patients had a positive laryngeal swab culture. Of the 12 positive, 9 did not expectorate and 3 did.

The objective of this work is to add accurate laboratory evidence to the facts that need to be known to make a diagnosis of pulmonary tuberculosis. At the present time with the mass x-ray surveys there are many patients diagnosed as tuberculous with only x-ray evidence. The patient's clinical status is reviewed carefully, but it is often difficult to get laboratory evidence unless laryngeal swab cultures are taken while the patient is seen in the clinic. The diagnosis of active pulmonary tuberculosis should be made only after correlating the x-ray, clinical, and laboratory evidence, and in that way very few patients will be called tuberculous when they are actually well.